DOCUMENT RESUME

ED 214 721 RC 013 266

AUTHOR Ockerman-Garza, Janet; And Others
TITLE Migratory Status and School Achievement: Analysis of Critical Mediating Variables.
PUB DATE Mar 82
NOTE 78p.; Paper copy not available due to author preference. Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, March 1982).

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Achievement; Academic Aspiration; Comparative Analysis; Grade 7; Junior High School Students; *Locus of Control; Mexican Americans; *Migrant Children; Occupational Aspiration; *Role Models; Role Perception; *Self Esteem; Sex Differences; *Social Isolation; Socioeconomic Status; Student Attitudes; White Students
IDENTIFIERS Dean Alienation Scale; *Nonmigrants; Nowicki Strickland Personal Reaction Survey; Rosenberg Self Esteem Scale

ABSTRACT

The relationship among key social/psychological variables (self-esteem, locus of control, social isolation, perceptions of role models) and achievement among migrant children was examined, using December 1980 data obtained from 1,004 seventh grade students (515 males/489 females) from a large school district in Hidalgo County in the Texas Lower Rio Grande Valley. The students were predominantly Mexican American; 445 were classified as migrants and 82% were classified as lower socioeconomic class. A questionnaire was developed that included three standardized instruments which were revised: Rosenberg Self-Esteem Index, Nowicki-Strickland Reaction Survey, and Dean's Alienation Scale. Students' perceptions of role models and related occupational structure were obtained from a series of open-ended questions. Achievement data were obtained from a review of students' Stanford Achievement Test subscores in social science, science, English, and math. Data indicated that non-migrants were in the "high" self-esteem category while migrants were in the "medium" category; migrants had a more external orientation than non-migrants; migrant students experienced more school social isolation than non-migrant students, and males were more isolated than females; and all students had a constricted view of the occupational structure and perceived good jobs in sex-stereotyped ways. (NQA)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED214721

MIGRATORY STATUS AND SCHOOL ACHIEVEMENT: ANALYSIS OF CRITICAL MEDIATING VARIABLES

JANET OCKERMAN-GARZA
CENTER FOR PUBLIC AND URBAN RESEARCH
COLLEGE OF PUBLIC AND URBAN AFFAIRS
GEORGIA STATE UNIVERSITY
ATLANTA, GEORGIA 30303

EUGENIO D. GARZA
U.S. DEPARTMENT OF EDUCATION
OFFICE OF EDUCATIONAL PROGRAMS
REGION IV
ATLANTA, GEORGIA 30321

AND

ROBERT E. SNOW
CENTER FOR PUBLIC AND URBAN RESEARCH
COLLEGE OF PUBLIC AND URBAN AFFAIRS
GEORGIA STATE UNIVERSITY
ATLANTA, GEORGIA 30303

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Janet Ockerman Garza

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

FEB 1982
ERIC/CRESS
RECEIVED

PREPARED FOR PRESENTATION AT:
THE ANNUAL MEETING OF THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION
MARCH, 1982
NEW YORK, NEW YORK

RC013266

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- ✓ This document has been reproduced as received from the person or organization originating it.
- ☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

TABLE OF CONTENTS

	page
List of Tables	ii
Introduction	1
Literature Review	6
Method	15
Analysis	21
Conclusions and Recommendations	54
References	60

DRAW PAPER
DO NOT FOLD

LIST OF TABLES

page

Table 1. Stanford Achievement Test Social Science Subscores for Migrant and Non-Migrant Students..... 22

Table 2. Stanford Achievement Test Science Subscores for Migrant and Non-Migrant Students..... 23

Table 3. Stanford Achievement Test English Subscores for Migrant and Non-Migrant Students..... 24

Table 4. Stanford Achievement Test Math Subscores for Migrant and Non-Migrant Students..... 25

Table 5. One-Way Analysis of Variance of Stanford Achievement Test Subscores for Migrant and Non-Migrant Student..... 27

Table 6. Stanford Achievement Test Subscores for All Students by Sex of Student..... 28

Table 7. Stanford Achievement Test Subscores for Migrant Male and Female Students..... 29

Table 8. Stanford Achievement Test Subscores for Non-Migrant Male and Female Students..... 30

Table 9. Analysis of Variance of the Social Science Subscores of the Stanford Achievement Test..... 31

Table 10. Analysis of Variance of the Science Subscores of the Stanford Achievement Test..... 31

Table 11. Analysis of Variance of the English Subscores of the Stanford Achievement Test..... 32

Table 12. Analysis of Variance of the Math Subscores of the Stanford Achievement Test..... 32

Table 13. One-Way Analysis of Variance of Self-Esteem Scores for Migrant and Non-Migrant Students..... 34

Table 14. One-Way Analysis of Variance of Self-Esteem Scores for Male and Female Students..... 34

Table 15. Analysis of Variance of Self-Esteem Scores..... 34

BLANK PAGE
DO NOT FILM

page

Table 16. One-Way Analysis of Variance of Locus of Control Orientation Scores for Migrant and Non-Migrant Students..... 36

Table 17. One-Way Analysis of Variance of Locus of Control Orientation Scores for Male and Female Students..... 36

Table 18. Analysis of Variance of Locus of Control Scores..... 36

Table 19. One-Way Analysis of Variance of Dean's Alienation/ Social Isolation Subscale Scores for Migrant and Non-Migrant Students..... 37

Table 20. One-Way Analysis of Variance of Dean's Alienation/ Social Isolation Subscale Scores for Male and Female Students..... 37

Table 21. Analysis of Variance of Dean's Alienation/Social Isolation Subscale Scores..... 37

Table 22. One-Way Analysis of Variance of School Social Isolation Scale Scores for Migrant and Non-Migrant Students..... 38

Table 23. One-Way Analysis of Variance of School Social Isolation Mean Scores for Male and Female Students..... 38

Table 24. Analysis of Variance of School Social Isolation Scores. 38

Table 25. Students' Perceptions of "Good Jobs"..... 40

Table 26. Reasons for Opinions of "Good Job"..... 41

Table 27. Students' Perceptions of Jobs Related to Mathematics Ability and Aptitude..... 42

Table 28. Perceptions of Students of Jobs Related to Interest in Working with Animals..... 43

Table 29. Frequencies of Responses to "Best Job" by Status of Job for Migrants and Non-Migrants..... 44

Table 30. Intercorrelation Matrix of Demographic, Attitudinal, and Achievement Variables..... 46

Table 31. Partial Interrelation Matrix for Selected Items from the RSE..... 48

Table 32. Partial Interrelation Matrix for Selected Items from the I-E Scale..... 50

BLANK PAGE
DO NOT FILM

page

Table 33. Partial Intercorrelation Matrix for Selected Items from the DAS and SSI Scales..... 52

Table 34. Participation in School Activities for Migrant and Non-Migrant Students..... 53

Table 35. Attitudes Toward High School Graduation..... 53

BLANK PAGE
DO NOT FILM

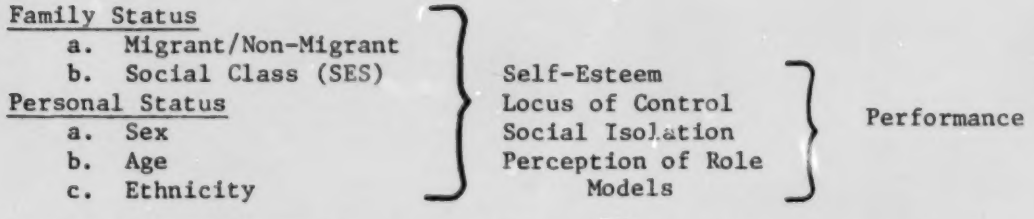
MIGRATORY STATUS AND SCHOOL ACHIEVEMENT: CRITICAL MEDIATING VARIABLES

INTRODUCTION

The purpose of this research was to evaluate some assumptions concerning the relationships among key social/psychological variables and achievement among children of migratory agricultural workers or migratory fishers. It is expected that results of the research will be useful in developing educational programs which address needs of this group of students and will have policy implications for the creation of an educational system for mobile student populations.

The general hypothesis which guides this research is that social/psychological variables are mediating factors which influence the relationship between migratory status and achievement. Such social/psychological factors are hypothesized to be predictive of academic achievement, when achievement is traditionally defined in terms of school performance.

The hypothesized model suggested by this research may be depicted in the following manner:



*The authors express their appreciation to the following persons for technical, logistical and editorial support in the conceptualization, development, implementation and interpretation of this research: the staff of the Texas Migrant Interstate Project (particularly Jesús Vela and Delores Rodriguez), and the staff of the Center for Public and Urban Research (particularly John D. Hutcheson, Jr., Judith DeWitt, and Margaret Gaddy). We also appreciate the assistance of Irma Garza in data collection. This paper is part of a more detailed presentation forthcoming under the title Brown Children in the Little Red School House - Migrant Mexican Americans and School Achievement, manuscript in preparation, ©Ockerman-Garza, 1981.

The primary research question sought to assess the effects of interruption in the educational process (which occurs as a result of being migratory) upon academic performance, and the effects of this interruption upon social/psychological factors, which were, in turn, hypothesized to influence performance.

If, as hypothesized, migratory status affects the social/psychological variables in a manner which has detrimental effects upon performance, the analysis will identify factors which could become critical elements in educators' attempts to intervene in a system which appears to result in failure for migratory children. National policy implications for the development of an educational system for mobile student populations may be suggested as a result of the identification of these critical factors.

Background

Low achievement rates and high dropout rates are especially acute among the segment of the economically disadvantaged student population classified as migrant. The true dropout rate of migrant youth is very difficult to estimate accurately due to the mobility of the population. However, junior and senior high school counselors in South Texas recently estimated that in many South Texas school districts as many as 50 percent of the migrant students never enter senior high school. Other districts in the area experience the same high dropout rate, but it occurs between ninth and tenth grades. Counselors indicated that the male dropout rate is slightly higher than that for female migrant students. Other areas of the country with similar concentrations of migrant

students report comparable experiences. Underachievement among the migratory student population has obviously contributed to this pattern of dropping out.

Last year, at least a million children followed their parents, who are officially called "migrant workers," in their nomadic lifestyle along one of the three major migrant routes or "streams." Most migrant families move along these streams in search of agricultural work on farms and in forests. Although the racial and ethnic mix of the migrants includes Hispanics, Blacks, Whites, Native Americans, and Indo-Chinese, most of them are Hispanics who are Mexican Americans.

Migrancy has become a way of life for these Mexican Americans, most of whom come from the Lower Rio Grande Valley of Texas (El Valle). Like the geese that migrate south every year, the migrant families move from the Valley to "El Norte" (the north) with the coming of warm southern weather. They must move in order to work, to survive. Most leave in the early spring (from April through May) and return again in the fall (October through November). Many families move constantly during these months on the road; others work in one area and move less frequently. The children often work in the fields and groves alongside adult family members. Even if the children do not actually work in the harvests, their education is disrupted, and while in the migrant stream they experience the same hardships as the adults - hostility, exploitation, discrimination, and adverse living conditions.

Ernesto Galarza has pointed out that Mexican and Mexican American farm workers, as a group, have

> . . . been subject to the special mode of acculturation that takes place when one culture is plumped into the midst of another on unequal terms. To make a living, the members of the culture-away-from-home must accept terms and conditions that enable them to survive and little more. With this type of acculturation there is relegation, of which discrimination and segregation are merely psychological and administrative techniques. We now have a superculture and a subculture (Galarza, 1971, p. 18).

Typically, the migrant family is poor; adult workers are estimated to earn less than $3,000 per year. It has been hypothesized that the effects of this family poverty; the "subculture" or migrant world-view to which Galarza refers; the constant interruption in the migrant child's schooling; and structural barriers within the schools (i.e., policies regarding early withdrawal which encourage migrant dropouts, perhaps better termed "push-outs") have combined to result in the high degree of failure observed among migrant students, particularly Mexican American migrant students. José A. Cardenas, a noted expert in Hispanic educational needs, has explained that

> . . .It is only when mobility is coupled with poverty, culture, language, or societal perceptions that it becomes a liability for the minority child. . .It is language, and culture, and poverty, and mobility, and perceptions in tandem which account for the poor performance of minority children (Cardenas and Cardenas, 1976, p. 10).

The Director of the Interstate Migrant Educational Project of the Education Commission of the States has noted that ". . .the great challenge in migrant education is to overcome the difficulties associated with a child's mobility - and to provide an education that has continuity" (PTA Today, 1979). However, with the limited research available regarding migrants, particularly Mexican American migrants, schools have often had limited information upon which to structure programs.

What research is available has failed to answer the critical questions of:

1) why migrant student achievement is so low and what can be done to improve achievement;
2) why migrant students drop out of school in such large numbers; and
3) what can be done to keep migrant students in school to obtain a high school diploma (Hunter, 1980).

Some educators, and others, have contended that the educational needs of migrant children are unique. However, a recent national assessment of migrant student educational needs (Hinkle et. al., 1979) noted that most respondents (particularly teachers and school administrators from the Eastern Stream) believe that migrant children's needs are greater than non-migrant children's needs, but that they are the same as other low-income or low-income minority students' needs in most areas of education. The 1979 study pointed out that such research is needed on migrant students, even though "disadvantaged" or "culturally different" students have been studied extensively. The proposed model will allow tests of these assumptions.

Rationale

In summary, the general problems of the migratory agricultural farm workers and migratory fishers are: low income, unstable unemployment, very poor living and working conditions, lack of education and job skills, lack of essential services, and poor health. Some causes of migrant problems include: the nature of the agricultural work place, the low economic value of farm work, and social prejudice. Governmental responses to migrant problems include: Title I, Migrant Education, Migrant Health Programs, Nutrition Programs, general social services,

and farm worker labor laws.

The migrant child's problems in school are generally viewed as being caused by the same factors which cause problems for the migrant family. The migrant child potentially faces language and cultural prejudice, mobility, the lack of a full-time peer group, social isolation, poor general health, and his/her family's economic need, which often forces him/her to work in the fields.

Additionally, many have argued that the schools themselves have created and maintained the patterns of failure observed among these children. Bowles and Gintis (1976) maintain that our economic system requires that a certain percentage of the society live at the poverty level. John Ogbu argues that America's minority children have ". . . historically been provided with inferior education as a means of fitting them for lower caste status (Ogbu, 1978, p. 177)."

LITERATURE REVIEW

Previous research has demonstrated a relationship between student achievement and certain critical social/psychological variables. The current research examined certain of these hypothesized "mediating variables." By understanding the effect of such variables, educators may be able to intervene in a causal system that appears to result in educational failure for migratory children. Research relative to the "mediating" variables abounds in the literature of sociology, psychology, social psychology and education. Such a broad perspective cannot be fully discussed here, so only that empirical research focusing on

minority students will be examined.

Self-Esteem

Self-esteem was the first social/psychological variable chosen for investigation by this research. Gergen (1971) viewed the development of the "self" structure as occurring through the learning and weighting of "concepts." Erikson (1959) likewise theorized that a "learned need" to categorize leads the person to develop a set of concepts of self. Although the person may learn a variety of ways to view self, certain views are learned more thoroughly than others (Gergen, 1971, p. 31). Such learning is the evaluative weighting of a concept. If behavior (as applied to a concept) brings pleasure, that concept will become positively weighted (Gergen, 1971, p. 34). The person thus learns the evaluative significance of concepts from experience with the surrounding culture. As Gergen states, evaluative weighting thus learned ". . . forms an integral part of the person's self-esteem" (p.36). Therefore, "self-esteem can be thought of as the evaluative component of self-concept" (p.37). It is a ". . .person's perceptions of this worth . . . which are assumed to derive from . . . self-other comparisons" (Long, Henderson & Ziller, 1970, p. 10).

Viewed thus, self-esteem has been shown to be related to academic achievement. Much of this research has been summarized by Purkey (1970). Self-esteem also has been shown to be related to the variables of sex (Berger, 1968; Carter, 1968; Hollender, 1972; Rosenkrantz et. al., 1969) and SES (Ausubel and Ausubel, 1963; Rosenberg and Fearlin, 1978; Soares and Soares, 1969; Townbridge, 1972). However, the nature of its

relationship to either sex or SES has not yet been established.

The relative levels of self-esteem among Mexican American students has received different assessments in the literature (Carter, 1968; Cervantes & Bernal, 1976; Evans, 1970; Larned, D.T. and Muller, D., 1979; Healthy, 1974; Malry, 1968; Ockerman & Garza, 1979; Parson, 1965; Samuels & Criffore, 1979). However, the relationship between Mexican American cultural attributes and self-esteem has not yet been fully determined (Dworkin, 1965; Kagan & Knight, 1979; Knight et. al., 1978; Muller & Leonett, 1979). Although considerable descriptive information on migrant children exists (Coles, 1970; Taylor, 1973), few controlled investigations of migrant Mexican American social or psychological attitudes are available to guide hypothesis-generation on this relationship. Gecas (1973; 1980) reported on data collected in 1971 from 85 Mexican American families in which most male heads were engaged in farm work, either as settled-out laborers* or as migrant workers. The research was conducted in the Yakima Valley of Washington State. In 1973, Gecas reported that migrant Mexican Americans, at all age-levels investigated, had a more positive self-view than settled-out Mexican Americans in the sample. The researcher suggested that the forces of

*Migrants are generally classified in three categories: 1) those persons or families who move for agriculturally related employment virtually year-round and who have no permanent home; 2) those persons or families who move for agriculturally related employment a portion of the year and who return to a "home base;" and 3) those persons or families who have moved for the purpose of agriculturally related employment within the last five years. "Settled-out" migrants is a term often used to describe this third group. In Gecas' study, "settled-out" describes those migrants who had been living in the Yakima Valley for at least a year.

acculturation upon the settled-out families appears to produce some negative effects upon self-conceptions (p. 593). Henggeler & Tavormina (1978) compared very small groups (n=24 each) of Mexican American migrant farm workers' children who had no known physical, emotional, or intellectual handicap and who were enrolled in public school in 1974 in the Charlottesville, Virginia, area to Black children matched by age, sex, and SES, who had never been referred for a psychological consultation. They were also compared to a matched group of Blacks who had been referred previously for a psychological consultation. In terms of overall self-concept, migrant children were "well-below" the "Non-Referred Blacks" and differed little from the "Clinical Blacks." On a "projected" achievement measure, the migrants were significantly below the "Non-Referred Blacks" but above that of the "Clinical Blacks" (p.103).

Locus of Control

Locus of control was the second social/psychological variable investigated in this research. This construct refers to an individual's generalized orientation toward control of reinforcement, which is generally "internal" or "external." The construct has been extensively investigated since its introduction through Rotter's social learning theory (1954; Rotter et. al., 1972). The theory describes the degree to which the individual perceives reinforcement to be contingent upon his/her own behavior and develops a continuum to express that degree. Much of the theoretical basis of the construct, methodological considerations, and research related to the construct are examined by Lefcourt (1976).

Early work implicating locus of control in achievement behavior was developed by Crandall and others at the Fel's Research Institute (Crandal et. al., 1962; Crandal et. al., 1965). Other investigators have found a positive relationship between aspects of achievement behavior and internal control orientation (Harrison, 1968; Lessing, 1969; McGhee & Crandall, 1968); however, other research has been inconsistent (Nowicki & Roundtree, 1971; Stephen & Delys, 1973). It has been hypothesized that there is a positive relationship between high self-esteem and internal locus of control, and that this interrelationship is associated with achievement behavior. However, the nature of this relationship has not been clarified (Epstein & Kormorite, 1971; Piers, 1977; St. John, 1971).

Lefcourt (1976) viewed locus of control ". . .as a mediator of involved commitment in life pursuits. If one feels helpless to effect important events then resignation or at least benign indifference should become evident. . ." (p.152). As such, it is logically consistent that persons ascribed minority social status and/or lower SES would have more of an external control orientation than persons of higher SES and non-minority status. Research has found external control orientation more frequently among lower SES than among higher SES groups. It has also been shown to be more typical of minority than of non-minority subjects (Battle & Rotter, 1963; Lefcourt & Ludwig, 1965; Zytkoskee et. al., 1971). The relative importance of either variable has not been established. Sex has also been shown to be an important variable related to locus of control and to achievement behavior

(Messor, 1972; Parwat et. al., 1979; Wolfgang & Potvin, 1973). But the possible interaction of sex, locus of control, and achievement has not been established.

Ethnicity among minority social status groups and their subcultures has been shown in some research to be related to locus of control (Graves & Jessor, 1961; Hsieh et. al., 1969; Scott and Phelan, 1969). Some research has found Mexican American subjects to be more externally oriented than Anglos/Whites (Graves, 1961; Scott and Phelan, 1969), while other research found no differences between Anglos and Mexican Americans (Baker et. al., 1979); Carrillo-Beron, 1974; Carter, 1968; Knight et. al., 1978). A third study concluded that Mexican Americans were more internally oriented than Whites (Garza & Ames, 1974). In addition, research has suggested that locus of control is influenced by the age of the subjects (Prawat et. al., 1979) and is situationally or domain-specific (Gaa & Shores, 1979).*

A few methodologically limited studies have specifically examined locus of control among migrant farm workers or their children. Hoffman (1978) demonstrated a positive relationship between involvement with the United Farm Workers Union and internal control orientation, which the researchers attributed to a reduction in "perceived powerlessness" among the workers. Subjects were male Mexican American seasonal farm workers who lived and worked in California's San Joaquin Valley (Lamont-Arvin area). Shannon's (1979) research included 280 Mexican Americans

---

*See Lefcourt (1976; p. 153) for a more thorough discussion of this latter idea.

in Racine, Wisconsin, most of whom had previously been migrant farm laborers. These settled-out migrants (See footnote, p. 8) increased in internality (the researcher defined internality as "active") from 1960 to 1971. Some sex differences were also noted. (Females were more external.) Henggeler and Tavormina (1978) found Mexican American children of migrant farm workers to be similar in control orientation to Black children who had been referred for psychological consultation for problems in school or delinquency. The migrant children were more externally oriented than the non-referred Black children in the study.

Social Isolation

Social isolation has also been shown to be related to academic achievement and was the third social/psychological variable investigated by this research. Social isolation is one way to conceptualize alienation. Alienation, as a construct, has been widely studied in sociology and psychology. Social alienation has been related to three lower-order concepts: powerlessness, normlessness, and social isolation. Social isolation connotes the degree to which the individual feels separated from a group or society or from group or societal standards. Lefcourt (1976) has also suggested that a general measure of alienation may be one way to conceptualize locus of control.

Much of the research related to an examination of alienation or isolation of students in the school setting has concentrated upon behavioral indicators of isolation (such as a lack of participation in co-curricular activities or rejection by peers). Such assessments have been shown to be positively related to minority (Black and Mexican

American) students' achievements (Caliver, A., 1970; Texas Education Agency, 1980; U.S. Commission on Civil Rights, 1973).

A 1980 Texas Education Agency's study is apparently one of the few investigations which attempted to identify lack of cocurricular activities as a predictor of student dropout behavior among migrant Mexican American students. This research among migrant youth in the Robstown/Kingsville, Texas, area found that lack of involvement in cocurricular activities was the strongest predictor of dropping out of high school. However, Farris and Brymer (1970) argue that Mexican American youth have a different socialization experience than Anglo youth, and that it is those Mexican American youth who are "alienated" from their cultural peers who succeed in school, while those who are "integrated" drop out. This latter study concentrated upon peer group and heterosexual relations and commitment to the identities vested in those relationships, and not upon integration into the ongoing educational process.

Perceptions of Role Models

The final area chosen for study in this research was students' perceptions of role models. The literature relative to "role modeling" or "role imitation" spans several decades and numerous disciplines. Subareas within the general topic area, such as sex role socialization, have recently been reviewed. (See, for example, Safilios-Rothschild, 1979.) It is not the purpose of this research to duplicate any of these recent reviews, but to focus narrowly upon the relationship between perception of role models and academic achievement within the context of the hypothesized model.

The model assumes a social learning approach in which modeling is a crucial psychological process (Bandura, 1965). In this approach, learning is assumed to take place through imitation that is positively reinforced. Such a social learning approach is related to Mead's (1934) theory of the child's development of the "self." According to Mead, the individual comes to possess a self only in relation to the selves of all others in the social group. The structure of the individual's self, of necessity, reflects the patterns of behavior within the social group. The individual is able to develop the self through the use of role-taking. The first stage of role-taking is "imitation;" the second stage is "role-playing," and finally the playing of a formal "game."

Based upon these theoretical assumptions, numerous investigators have hypothesized relationships between minority students' perceptions of role models and academic achievement and between their perception of role models and self-esteem. The relative importance of this variable to either school achievement or self-esteem has not been clarified (Ockerman-Garza, 1979; Schulman et. al., 1973).

Gecas' (1980) investigation, described in an earlier section of this report, examined educational and occupational aspirations and expectations among Mexican American youth and their parents. There were two groups of farm worker families, settled-out migrants and migrants. Consistent with previous research in the area (Anderson & Johnson, 1971; Evans & Anderson, 1973; Kuvlesky & Patella, 1971; Kuvlesky et. al., 1971), Gecas found Mexican American children had high educational aspirations and viewed education as being ". . .important to their life

goals" (p.277). Likewise, the Mexican American parents placed high value upon education for their children. Gecas classified aspirational levels of the children with regard to occupation as "modest." For all youth, the occupations believed obtainable were lower than the occupational aspirations. The data show that migrant youth had both higher aspirations and expectations for attainment than did the settled youth in regard to education and occupation.

METHOD

Setting

The school system selected for the study is a large independent school district located in Hidalgo County in the Lower Rio Grande Valley of Texas. The City and County Data Book, 1977 (1978) reported that 85.9 percent of Hidalgo County's land was in farms. The county is 1,543 square miles in area, and its population is concentrated in the more urban areas of the county (74.1%). The county's population is poor, with 52.3 percent falling below 125 percent of the federal poverty level and 42.2 percent were below the poverty level. The 1979 per capita income of the McAllen-Pharr-Edinburg SMSA (these are the major urban centers in Hidalgo County) was $5,024. This income level was 43 percent below the national average and shows this SMSA to have the lowest per capita income in the United States (Robey, 1981, p. 40). Using U.S. Department of Housing and Urban Development classification, 55.1 percent of the county's 48,768 year-round housing units were "substandard." The agrarian base of the county is reflected by the fact that few (7.3%) of the residents were employed in manufacturing, and

only about a third (28%) were employed in wholesale and retail trade.

School officials estimated that 60 percent of the parents of their total school population are employed in migratory farm work. The figures shift from year to year, and the numbers of migratory children enrolled in this home base system, at any given time, reflects the nature of the occupation. The system also serves as a "receiver school" system for some intrastate migrant students. Approximately 85 percent of the households in the school system can be classified as lower-income, using the criteria for eligibility for the free or reduced lunch program.

The school system in which these students were enrolled provides extensive supplemental and specialized educational support services to migrants. Services have been provided since 1967 through federal funding provided by Title I, Migrant Education. Knowledgeable observers have consistently rated this district's migrant education program as "exemplary."* Migrant students in this district are also "followed" to receiver districts through the record transfer system and through the support services provided by the Texas Migrant Inter/Intrastate Project.

Subjects

Subjects in the research were 1,004 students enrolled in the seventh grade program in the system. All subjects were interviewed during the third week of December, 1980. There were 515 males and 489

*This assessment derives from the researcher's personal communications with such observers.

females, and the group was 44.4 percent migratory (N=445), utilizing a definition of "migrant" developed from current guidelines for defining eligibility in the Migrant Education Program. Most (82%) of the students were classified as holding lower socio-economic status (SES). The sample was predominantly (93%) Mexican American, and the remainder were White/Anglo. Only 43 students preferred a Spanish-language version of the instrument, and since no achievement data was available for this subgroup, little analysis from this group has been included.

Instruments

A researcher-constructed instrument was developed that included three standardized instruments which were revised for purposes of this research. The first standardized instrument included was the Rosenberg Self-Esteem Index (RSE) (Rosenberg, 1965). The original index is a Guttman Scale which measures overall self-esteem and was standardized on a very large group of New York eleventh graders. This group included some Spanish-speakers (primarily of Puerto Rican origin) and both Blacks and Whites, as well as other distinct ethnic or religious subgroups. The RSE has a Rep. > .92, with a two-week test-retest reliability coefficient of .85. Wylie (1974) presents a thorough review of the research utilizing the RSE. Garza and Ockerman-Garza (1979) utilized the RSE to assess self-esteem among Mexican American ninth graders, and the same age Black and White students in rural South Georgia. Based on these experiences, they revised the RSE with a restatement of the original ten items in language which communicates more clearly with younger students.

The second standardized instrument revised and included in the researchers' questionnaire was the Nowicki-Strickland Reaction Survey (Nowicki & Strickland, 1973) abbreviated form for seventh to ninth grade. The standardization sample for the development of the scale test-retest reliability coefficients for the seventh grade sample reported by Nowicki & Strickland was .66 percent. Prawat et. al. (1979) reported reliability coefficients of .67 and .72 for males and females, respectively. Limited research utilizing this instrument has been done with Mexican Americans or other Spanish-speaking groups. Henggeler & Tavormina (1978), whose research was reviewed above, used a Nowicki-Strickland instrument with migrant Mexican Americans over eight years of age and two groups of Black children. In that study, the instrument appeared to present some difficulties in comprehension for the migrant children, and administrators were instructed ". . .to explain the gist of the specific test item" (p.99).

The third standardized instrument utilized in the researcher-constructed instrument was the social isolation subscale of the Dean's Alienation Scale (Dean, 1961), containing nine items. The Dean's Scale was standardized on adults and college populations, but it has been utilized by the primary researcher with low-income Black and Hispanic college freshmen. (Gaddy & Ockerman-Garza, 1980). A brief review of the Dean's Scale can be found in Robinson & Shaver (1973). Social isolation in the school setting was assessed by students' self-reports of behavioral indicators of such isolation (i.e., participation in cocurricular activities). An index of school isolation was developed from

six items investigating this area.

Using Gecas' (1980) work on occupational aspirations and expectations of Mexican American migrants and "settled-out" Mexican Americans in Washington State as a conceptual framework, an assessment of the students' perceptions of role models and related occupational structure was developed from a series of open-ended questions. (Open-ended questions were chosen in order to capture the spontaneity of the children's responses and in order to assess "level" of knowldege by not suggesting particular responses.) The current study conceptually replicates portions of Gecas' work.

The completed assessment package was reviewed by a group of local experts. That review was supervised by the second author of this report, Garza, who is himself a Mexican American who grew up in the Lower Rio Grande Valley of Texas and is a former interstate migrant agricultural worker. He made the original translation of the instrument and used his Spanish translation for research conducted in another south Texas school system (See Garza & Ockerman-Garza, 1979) as a basis for the RSE. He utilized similar language in the translation of the other items of the questionnaire. Both English and Spanish forms were field-tested with a group of Hispanic, bilingual children in an Atlanta, Georgia, public school. The finalized version was reviewed by the Evaluator of the Texas Migrant Interstate Project, who made revisions based upon her current work with migrant students and upon her former experience as the child of migrant interstate farm workers.

The questionnaire included short demographic questions on sex,

ethnicity, and parent occupation and education to calculate the Hollingshead Two-Factor Index of Social Position (Hollingshead, 1958). An estimator of SES was developed from this latter instrument. A separate data collection form was developed to record achievement data from the school systems' standardized test scores. (Four subscores of the Stanford Achievement Test - social science, science, English, and math - were available for most students.) Migrant status was determined from school records provided by the Principals of the two junior high schools.

Administration Procedures

The primary author for this research (Ockerman-Garza) directed the data collection process in the field. She was facilitated in this effort by the Evaluator of the Texas Migrant Interstate Project. The Texas Evaluator provided all Spanish translation and, along with the researcher, served as a test adminstrator. All data were collected from intact English classes over a four-day period during the third week of December, 1980. All children were offered a choice of an English or a Spanish version, and classroom teachers identified students who would probably need, or would prefer, a Spanish version. Only 43 students were administered the Spanish version, and since no achievement data were available for these students, it is presumed that they were recent arrivals from Mexico. The researchers assisted each student in filling out the questionnaire. All questions were read to the students at least twice. Students filled out their own questionnaires under supervision of one of the test administrators and a

Mexican American student teacher who volunteered to assist.

ANALYSIS

The sample for this investigation included 1,004 students. Four hundred and forty-six (446) of these students were classified as "migrant," and the remaining 558 were "non-migrants." There were 515 males and 489 females. The students were predominantly Mexican Americans (93.2%) and about 82 percent of the total group were classified as lower-socioeconomic-class (SES), using the Hollingshead Two-Factor Index of Social Position. Migrant students fell into the lower-class SES category 92.3% of the time, while non-migrants fell into this category 72.1% of the time.

Review of students' Stanford Achievement Test (SAT) subscores in social science, science, English, and math revealed that migrant students performed academically from four to seven months below their non-migrant peers. Tables One through Four present these subscore distributions for all seventh graders in the sample and for migrants and non-migrants.

These distributions are displayed through the "box-and-whiskers" technique. The box-and-whiskers technique graphically displays the distribution of a variable. The "box" contains the middle 50 percent of the distribution, with the horizontal bar in the center of the box representing the median, and hence, 50 percent of the distribution of values lie above and below this value. The vertical lines extending from the box are the "whiskers" which show the range of the upper and lower 25 percent of the data. The dots at the extreme ends of the

Table 1. STANFORD ACHIEVEMENT TEST SOCIAL SCIENCE SUBSCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=866)

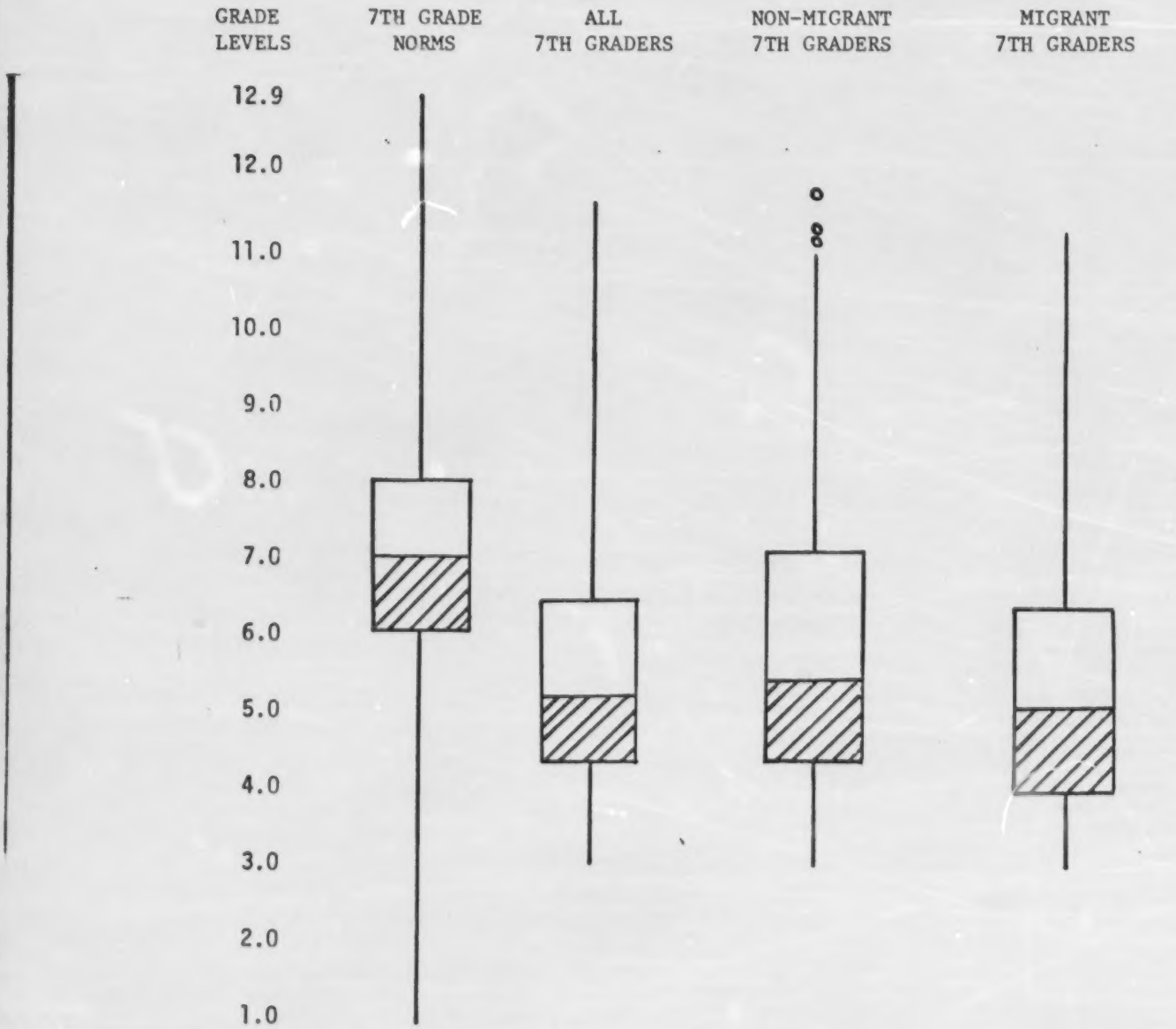


TABLE 2. STANFORD ACHIEVEMENT TEST SCIENCE SUBSCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=884)

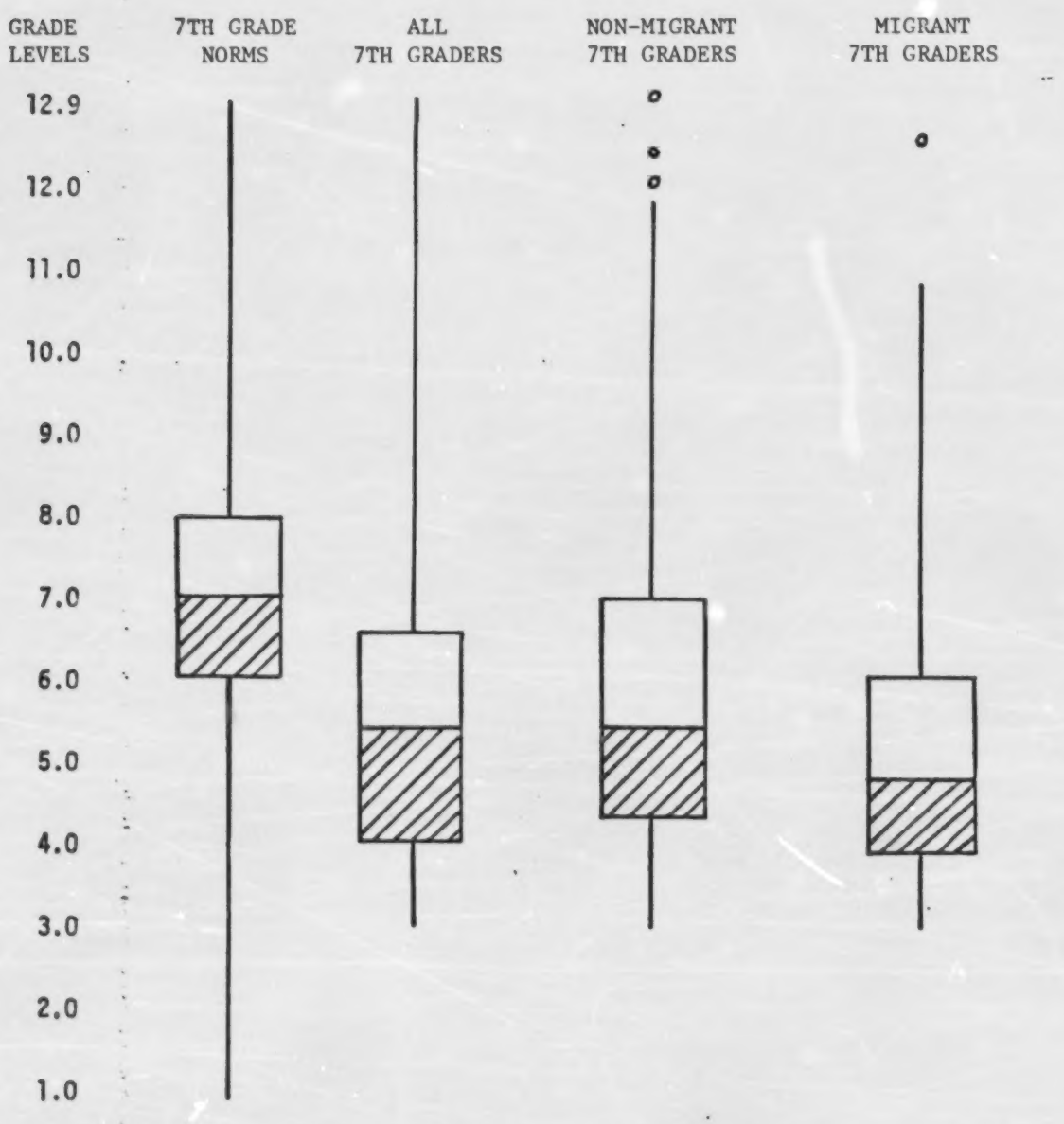


TABLE 3. STANFORD ACHIEVEMENT TEST ENGLISH SUBSCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=933)

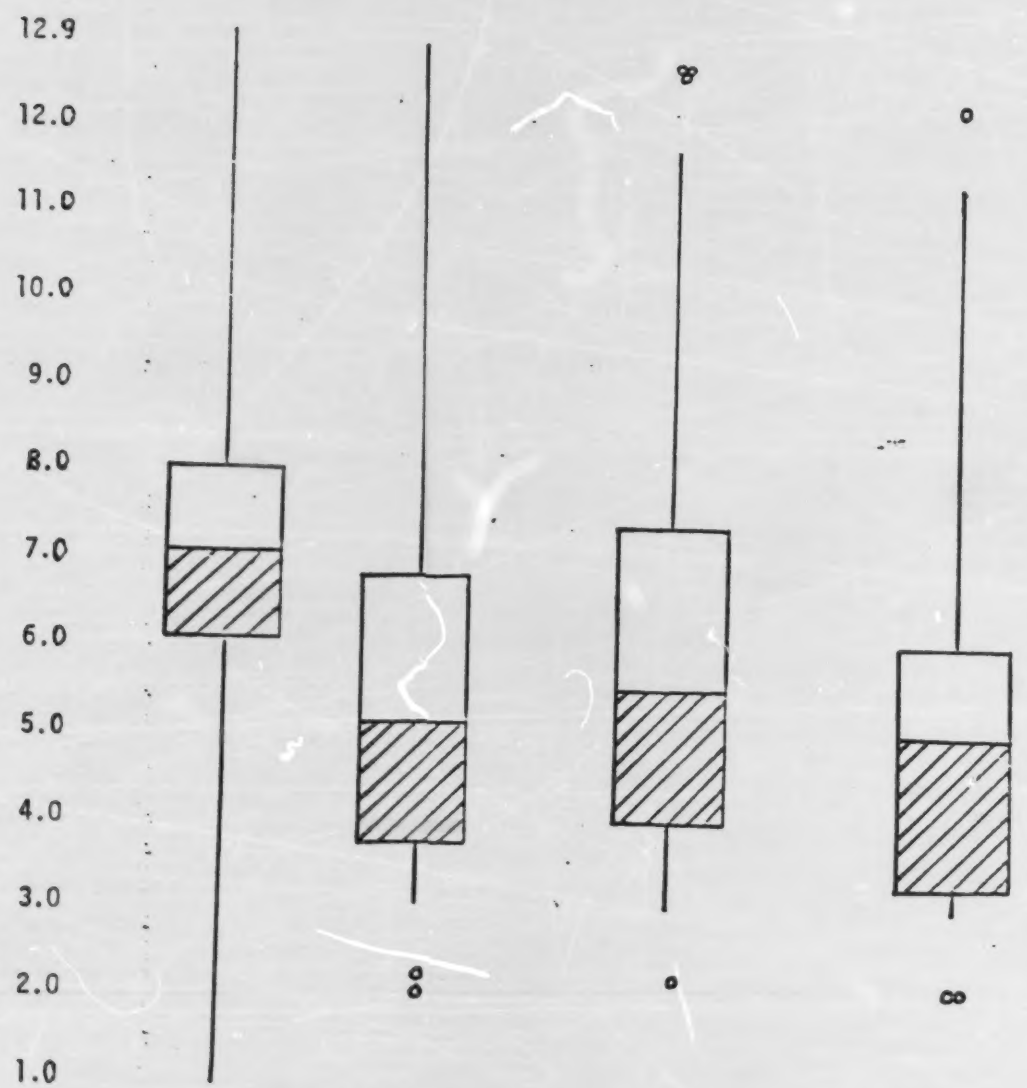
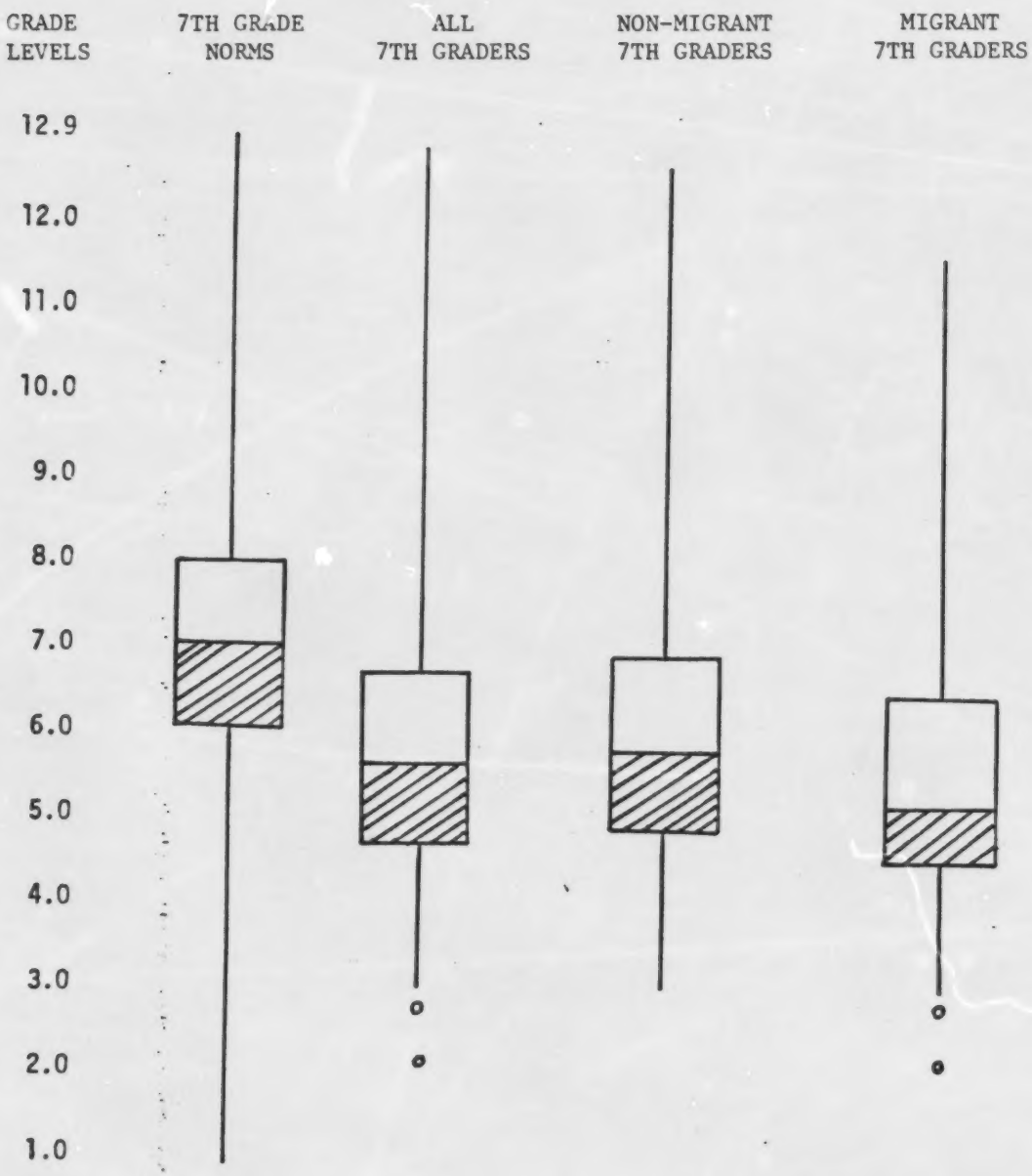


TABLE 4. STANFORD ACHIEVEMENT TEST MATH SUBSCORES
FOR MIGRANT AND NON-MIGRANT STUDENTS (N=930)



"whiskers" are the outliers of the distribution of values. Using this display technique, Tables One through Four compare the students to the theoretical norms for the Stanford Achievement Test. More than 75 percent of all students in the district were performing below the seventh grade median, on all subtests of the SAT.

Table Five presents the results of a one-way analysis of variance of the mean Stanford Achievement Test (SAT) subscores for migrant and non-migrant students. These data indicate the relative performance of the two groups on the four SAT subtests. On all subtests, non-migrant scores were significantly higher than the migrant students. Migrant students' achievement was closest to that of non-migrants in social science and math and showed the greatest difference on the English subtest. The standard deviations of migrant students' performance on these subtests indicated that the range of migrant students' scores was less than that observed for non-migrant students.

Given that gender of student has been shown to affect student performance in school achievement, data were examined separately for males and females. Table Six presents subscores by sex from the Stanford Achievement Test. Tables Seven and Eight present separate male and female distributions for the migrant and non-migrant students, respectively.

Tables Nine through Twelve display a two-way analysis of variance of the students' scores on the subtests of the Stanford Achievement Test. Sex of student and migrancy were introduced as independent variables while controlling for effects of SES. Table Nine reveals that

TABLE 5. ONE-WAY ANALYSIS OF VARIANCE OF STANFORD ACHIEVEMENT TEST SUBSCORES FOR MIGRANT AND NON-MIGRANT STUDENTS

Social Studies Score

	$\bar{X}$	SD	F
Migrants (N=387)	5.22	1.62	14.56*
Non-Migrant (N=499)	5.68	1.87	

*p<.0001

Science Score

	$\bar{X}$	SD	F
Migrants (N=396)	5.33	1.79	12.69*
Non-Migrants (N=498)	5.80	2.14	

*p<.0004

English Score

	$\bar{X}$	SD	F
Migrants (N=425)	5.12	1.89	29.10*
Non-Migrants (N=508)	5.86	2.26	

*p<.0001

Math Score

	$\bar{X}$	SD	F
Migrants (N=423)	5.54	1.46	18.49*
Non-Migrants (N=507)	5.98	1.60	

*p<.0001

TABLE 6. STANFORD ACHIEVEMENT TEST SUBSCORES FOR ALL STUDENTS
BY SEX OF STUDENT (N=1004)

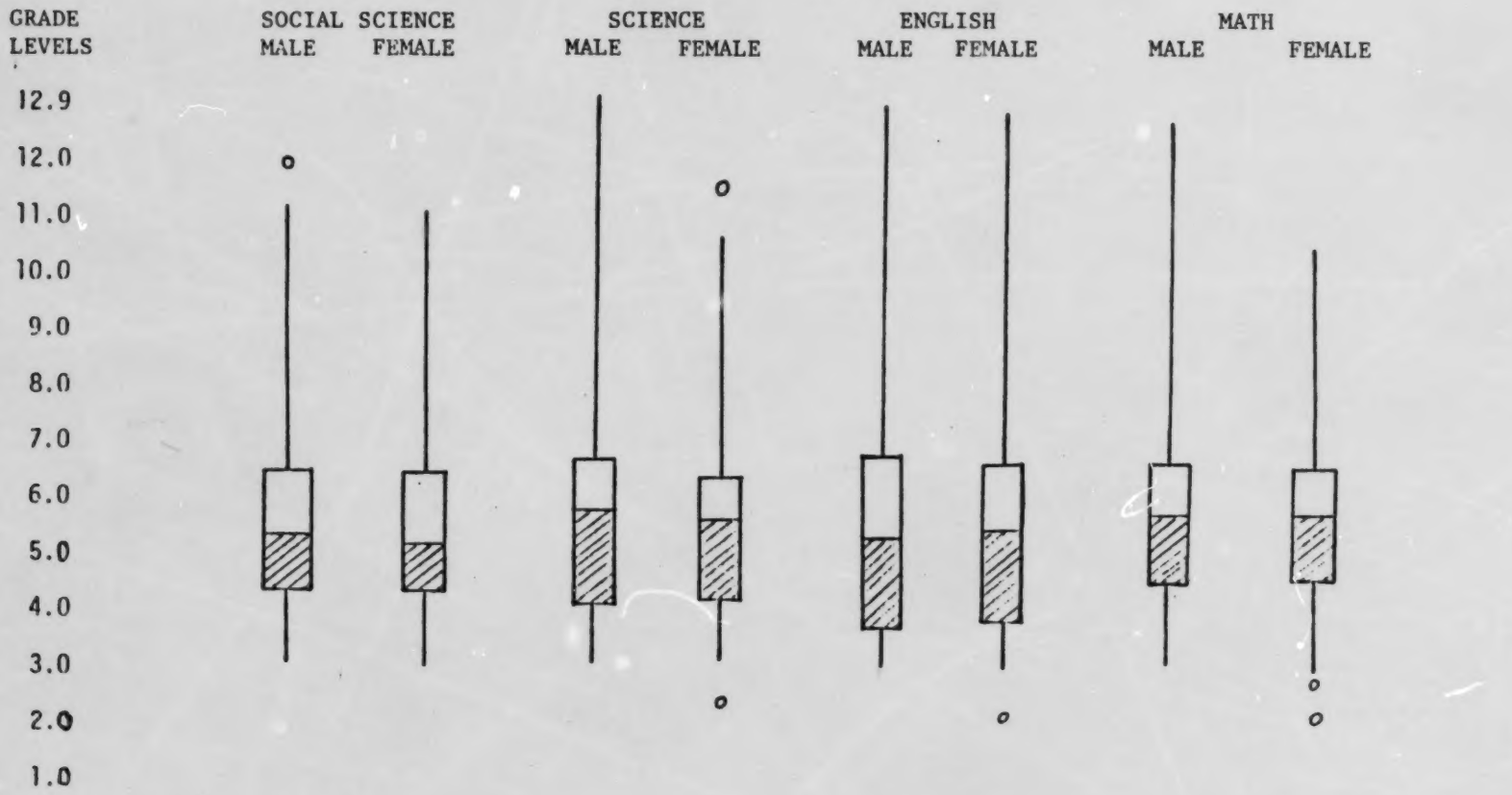


TABLE 7. STANFORD ACHIEVEMENT TEST SUBSCORES FOR MIGRANT MALE AND FEMALE STUDENTS (N=446)

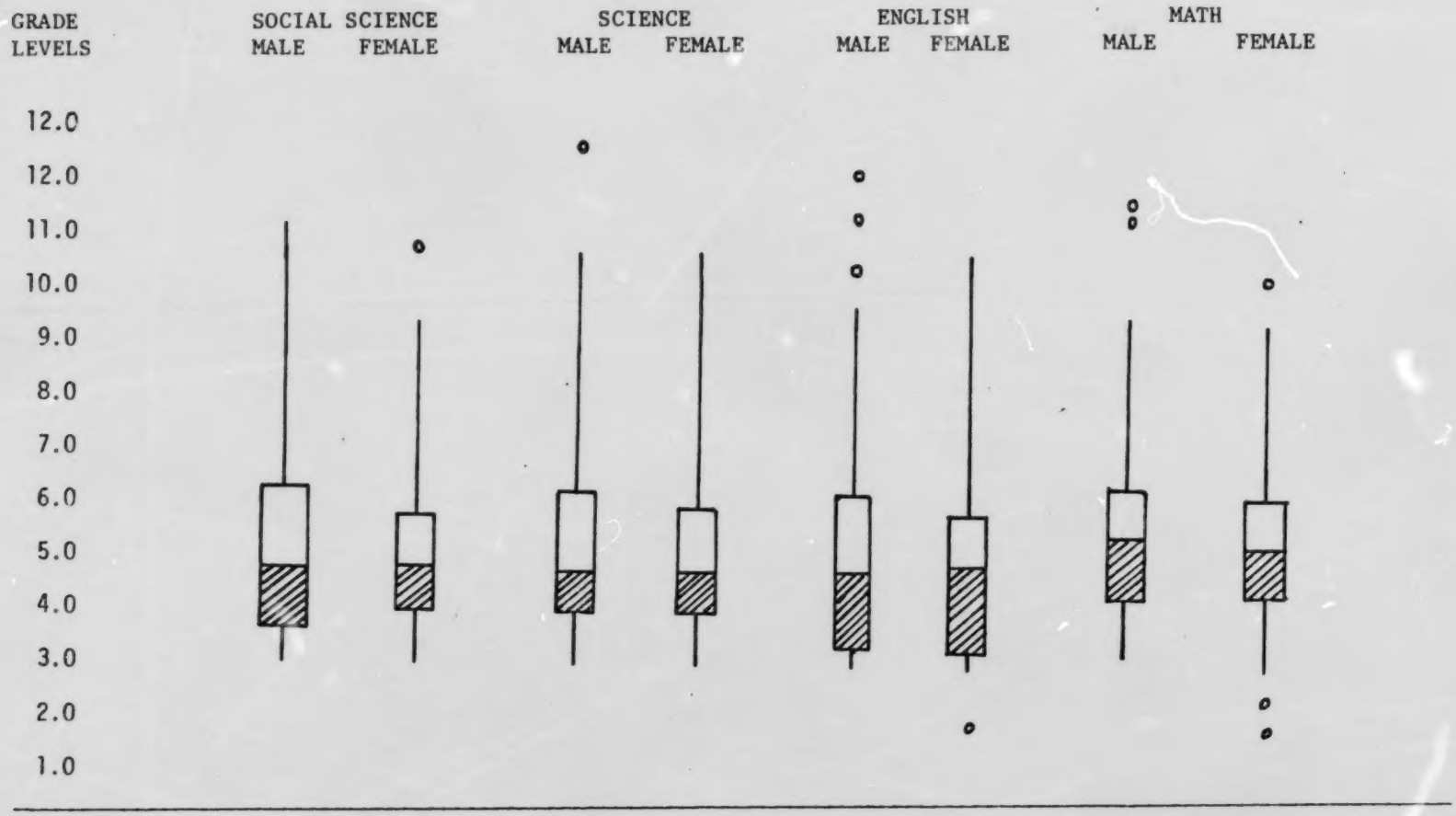


TABLE 8. STANFORD ACHIEVEMENT TEST SUBSCORES FOR NON-MIGRANT MALE AND FEMALE STUDENTS (N=558)

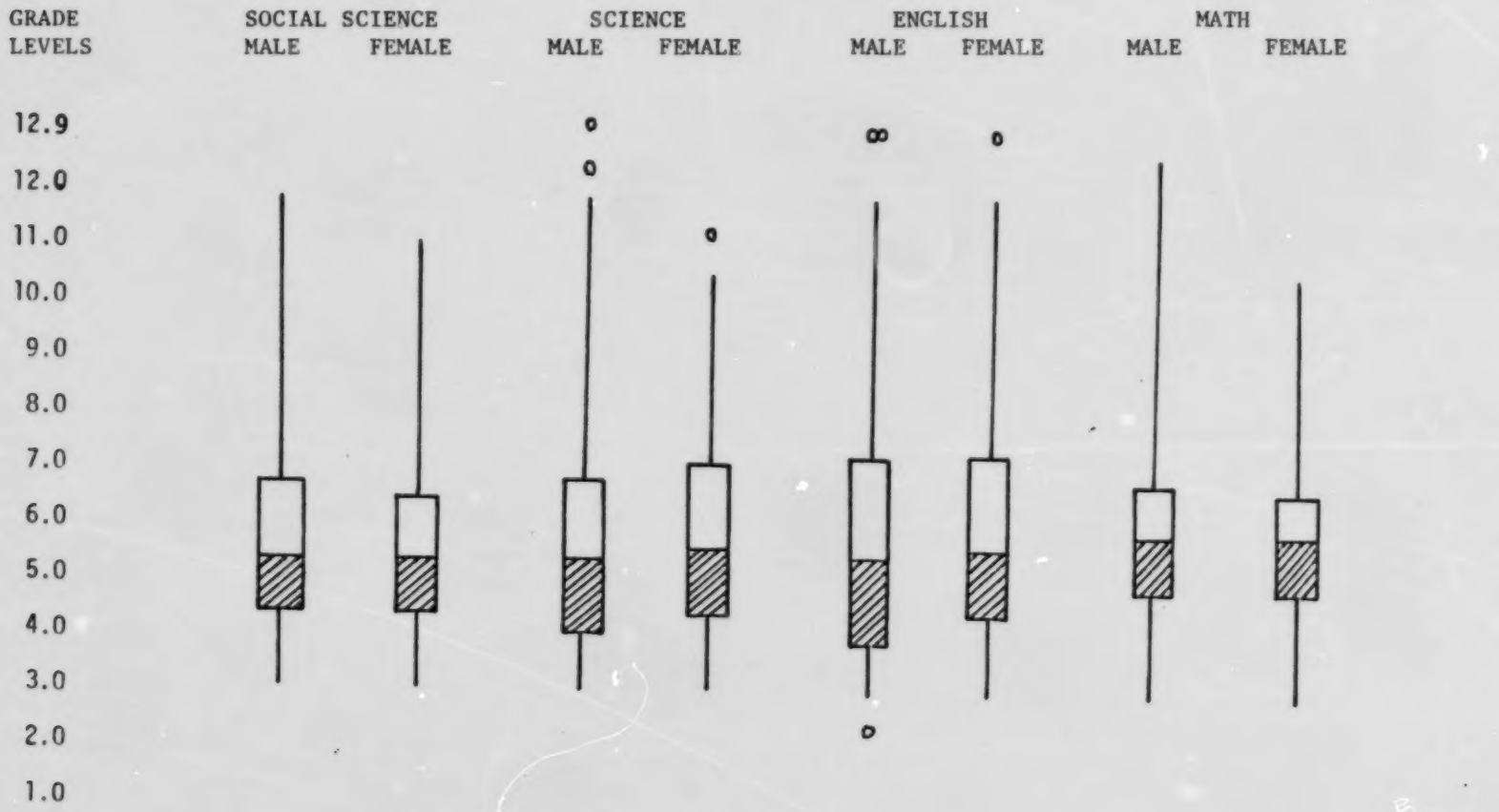


TABLE 9. ANALYSIS OF VARIANCE OF THE SOCIAL SCIENCE SUBSCORES OF THE STANFORD ACHIEVEMENT TEST (N=702)

Source of Variation	SS	df	MS	F
Covariate (SES)	129.25	1	129.25	41.05*
Sex (A)	4.31	1	4.31	1.37
Migrant (B)	6.69	1	6.69	2.12
Interaction (A x B)	2.57	1	2.57	0.82
Explained	142.87	4	35.72	11.34*
Residual	2194.76	697	3.15	
Total	2337.64	701	3.34	

*p<.0001

TABLE 10. ANALYSIS OF VARIANCE OF THE SCIENCE SUBSCORES OF THE STANFORD ACHIEVEMENT TEST (N=702)

Source of Variation	SS	df	MS	F
Covariate (SES)	136.30	1	136.30	33.63*
Sex (A)	2.22	1	2.22	0.55
Migrant (B)	6.31	1	6.31	1.55
Interaction (A x B)	4.77	1	4.77	1.17
Explained	149.64	4	37.41	9.20*
Residual	2833.50	697	4.17	
Total	2983.14	701	4.21	

*p<.0001

TABLE 11. ANALYSIS OF VARIANCE OF THE ENGLISH SUBSCORES OF THE STANFORD ACHIEVEMENT TEST (N=702)

Source of Variation	SS	df	MS	F
Covariate (SES)	186.80	1	186.80	41.73*
Sex (A)	0.01	1	0.01	0.00
Migrant (B)	27.61	1	27.61	6.17**
Interaction (A x B)	1.83	1	1.83	0.41
Explained	216.24	4	54.06	12.08*
Residual	3120.03	697	4.48	
Total	3336.27	701	4.76	

*p<.0001
**p<.01

TABLE 12. ANALYSIS OF VARIANCE OF THE MATH SUBSCORES OF THE STANFORD ACHIEVEMENT TEST (N=702)

Source of Variation	SS	df	MS	F
Covariate (SES)	67.28	1	67.28	28.99*
Sex (A)	3.70	1	3.70	1.59
Migrant (B)	6.95	1	6.95	2.99
Interaction (A x B)	0.12	1	0.12	0.05
Explained	78.09	4	19.52	8.42*
Residual	1617.02	697	2.32	
Total	1695.11	701	2.42	

*p<.0001

the covariate SES explained a significant amount of variance ($F=41.05$, $p<.0001$) in social science scores. Likewise, SES explained a significant amount of variance in science scores ($F=33.63$, $p<.0001$; Table 10). No main effects or interaction effects were indicated by the analysis of variance. However, on English scores (Table 11), migrant status explained a significant amount of the variance ($F=6.17$, $p<.0001$). The SES covariate revealed a significant effect upon English scores ($F=41.73$, $p<.0001$), and upon math scores ($F=28.99$, $p<.0001$). No other significant main or interaction effects were revealed by this analysis of variance. These data are presented in Table Twelve.

Data on the mediating variables (self-esteem, locus of control, social isolation and perception of role models) are presented in the following tables. Table 13 displays the one-way analysis of variance of self-esteem scale scores (RSE) for migrant and non-migrant students. The non-migrant students had significantly higher scores than the migrant students. The RSE mean score for the migrant group fell within the "middle" self-esteem category, while non-migrant students' mean score was barely within the "high" self-esteem category. Although there was a statistically significant difference between the two groups, both groups had "positive" self-esteem. There was no significant difference in RSE scores between male and female students (Table 14). When sex and migrancy were used in a two-way analysis of variance, while controlling for SES, SES explained a significant amount of the variance in the RSE scores (Table 15; $F=23.96$, $p<.001$). No main effects or interaction effect were revealed.

TABLE 13. ONE-WAY ANALYSIS OF VARIANCE OF SELF-ESTEEM SCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=1004)

	$\bar{X}$	SD	F
Migrants (N=446)	3.04	1.30	17.38*
Non-Migrants (N=558)	2.78	1.28	

*$p < .0013$

Lower scores indicate higher self-esteem.

TABLE 14. ONE-WAY ANALYSIS OF VARIANCE OF SELF-ESTEEM SCORES FOR MALE AND FEMALE STUDENTS (N=1004)

	$\bar{X}$	SD	F
Males (N=515)	2.83	1.26	2.61
Females (N=489)	2.96	1.79	

$p < .1066$

TABLE 15. ANALYSIS OF VARIANCE OF SELF-ESTEEM SCORES (N=704)

Source of Variation	SS	df	MS	F
Covariate (SES)	39.06	1	39.06	23.96*
Sex (A)	1.09	1	1.09	0.67
Migrant (B)	4.97	1	4.97	3.05
Interaction (A x B)	1.92	1	1.92	1.18
Explained	47.16	4	11.79	7.23*
Residual	1139.50	699	1.63	
Total	1186.66	703	1.68	

*$p < .001$

A one-way analysis of variance for the locus of control (I-E) scores (Table 16), revealed that migrants had a more external orientation than non-migrant students ($F=9.17$, $p<.0025$). Sex had a significant effect upon internal-external orientation socres. Table 17 shows that females were more external than males ($F=6.94$, $p<.0086$). Table 18 presents a two-way analysis of variance utilizing sex and migrant status as main factors and controlling for SES. SES explained a significant amount of the variance in internal-external orientation ($F=10.56$, $p<.001$), and no other variables explained a significant amount of variance in I-E scores.

The Dean's Alienation/Social Isolation (DAS) scores were examined by a one-way analysis of variance, and no significant effects were noted for migrancy (Table 19) or sex (Table 20). When these factors were introduced into a two-way analysis of variance with SES as a covariate (Table 21), SES explained a significant amount of the variance on the DAS ($F=7.24$, $p<.007$).

The school social isolation scale (SSI) scores for migrants and non-migrants were also compared using one-way analysis of variance (Table 22). Migrant students were more isolated than non-migrant students ($F=3.95$, $p<.047$). In Table 23, a one-way analysis of variance of SSI scores compared male and female students. Males were more isolated than were the females in the sample ($F=6.14$, $p<.0134$). In Table 24, the sex effect was reduced but maintained in a two-way analysis of variance ($F=3.63$, $p<.057$), but the covariate SES revealed the greatest effect upon SSI ($F=17.84$, $p<.0001$). No other factor explained a significant amount of variance in this analysis.

TABLE 16. ONE-WAY ANALYSIS OF VARIANCE OF LOCUS OF CONTROL ORIENTATION SCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=888)

	$\bar{X}$	SD	F
Migrants (N=389)	6.04	2.77	9.17*
Non-Migrants (N=499)	5.44	3.05	

*p<.0025
Higher scores indicate greater external locus of control.

TABLE 17. ONE-WAY ANALYSIS OF VARIANCE OF LOCUS OF CONTROL ORIENTATION SCORES FOR MALE AND FEMALE STUDENTS (N=888)

	$\bar{X}$	SD	F
Males (N=459)	5.45	2.80	6.94*
Females (N=429)	5.97	3.07	

*p<.0086
Higher scores indicate greater external locus of control.

TABLE 18. ANALYSIS OF VARIANCE OF LOCUS OF CONTROL SCORES (N=704)

Source of Variation				
Covariate (SES)	86.17	1	86.17	10.56*
Sex (A)	27.73	1	27.73	3.40
Migrant (B)	5.01	1	5.01	0.61
Interaction (A x B)	6.13	1	6.13	0.75
Explained	125.65	4	31.41	3.85**
Residual	5704.11	699	8.16	
Total	5829.76	703	8.29	

*p<.001
**p<.004

TABLE 19. ONE-WAY ANALYSIS OF VARIANCE OF DEAN'S ALIENATION/SOCIAL ISOLATION SUBSCALE SCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=993)

	$\bar{X}$	SD	F
Migrants	5.75	2.46	.816
Non-Migrants	5.89	2.48	

p<.3665

TABLE 20. ONE-WAY ANALYSIS OF VARIANCE OF DEAN'S ALIENATION/SOCIAL ISOLATION SUBSCALE SCORES FOR MALE AND FEMALE STUDENTS (N=993)

	$\bar{X}$	SD	F
Males (N=505)	5.80	2.42	0.159
Females (N=488)	5.86	2.53	

p<.6904

TABLE 21. ANALYSIS OF VARIANCE OF DEAN'S ALIENATION/SOCIAL ISOLATION SUBSCALE SCORES (N=704)

Source of Variation	SS	df	MS	F
Covariate (SES)	44.27	1	44.27	7.24*
Sex (A)	0.54	1	0.54	0.09
Migrant (B)	1.69	1	1.69	0.28
Interaction (A x B)	3.70	1	3.70	0.61
Explained	50.16	4	12.54	2.05
Residual	4271.40	699	6.11	
Total	4321.56	703	6.15	

*p<.007

TABLE 22. ONE-WAY ANALYSIS OF VARIANCE OF SCHOOL SOCIAL ISOLATION SCALE SCORES FOR MIGRANT AND NON-MIGRANT STUDENTS (N=986)

	$\bar{X}$	SD	F
Migrants (N=437)	8.85	1.99	3.95*
Non-Migrants (N=549)	9.09	1.89	

*p<.047
Lower scores indicate greater social isolation in the school environment.

TABLE 23. ONE-WAY ANALYSIS OF VARIANCE OF SCHOOL SOCIAL ISOLATION SCALE SCORES FOR MALE AND FEMALE STUDENTS (N=986)

	$\bar{X}$	SD	F
Males (N=504)	8.84	2.00	6.14*
Females (N=482)	9.15	1.87	

*p<.0134
Lower scores indicate greater social isolation in the school environment.

TABLE 24. ANALYSIS OF VARIANCE OF SCHOOL SOCIAL ISOLATION SCORES (N=704)

Source of Variation	SS	df	MS	F
Covariate (SES)	64.07	1	64.07	17.84*
Sex (A)	13.03	1	13.03	3.63**
Migrant (B)	3.47	1	3.47	0.97
Interaction (A x B)	3.73	1	3.73	1.04
Explained	83.98	4	20.99	5.84*
Residual	2511.25	699	3.59	
Total	2595.23	703	3.69	

*p<.0001
**p<.057

The data on students' perceptions of jobs are displayed in Tables 25 through 28. These tables present the actual responses of the students to the open-ended items on the questionnaire. All occupations chosen by at least ten students were reported in these tables. The data in Tables 25 and 26 on "Best Job" revealed that migrant students, as a group, named fewer jobs than the non-migrant students. These data suggest that migrants had a narrower view of the occupational structure than did the non-migrant youth. Students of both groups, but particularly migrants, gave sex-typed occupational responses. This was especially obvious for migrant females (i.e., teacher, secretary, nurse). The "rationale" for what makes a "good job" (Table 26) also revealed sex-typed responses (i.e., "helps people" for females and "pays well" for males). Interestingly, only migrant males mentioned "good working conditions" with frequency. "Math Jobs" (Table 27) and "Animal Jobs" (Table 28) manifest similar response patterns for migrant and non-migrant youth. In both cases, the youth frequently discussed a limited range of occupations. However, the data suggested that the range was most limited for migrant students.

Frequencies for "Best Job" responses, classified by SES status categories, are displayed in Table 29. Migrant and non-migrant students revealed a similar response pattern. However, a slightly higher percentage of non-migrant than migrant students named jobs which rank as professional positions, while frequencies for low-level professional and white collar positions were higher for migrant than non-migrant youth. These data suggest that, although 40 percent of the migrant students

TABLE 25. STUDENTS' PERCEPTIONS OF "GOOD JOBS" (N=1004)

ITEM: "What is the best job you can think of?"

	Males		Females	
Migrants	Jobs	N	Jobs	N
	Number of Jobs Reported*	49	Number of Jobs Reported	37
	Doctor or Veterinarian**	28	Teacher	45
	Lawyer or Judge	27	Secretary	30
	Trucking	21	Doctor or Veterinarian	28
	Police/Firefighter	19	Nurse	18
	Pro Athlete	12	Lawyer or Judge	17
			Store Sales Worker	12
			Police/Firefighter	10
Non-Migrants				
	Number of Jobs Reported	54	Number of Jobs Reported	50
	Doctor or Veterinarian	45	Teacher	56
	Lawyer or Judge 40	40	Lawyer or Judge	32
	Mechanic	19	Secretary	18
	Police/Firefighter	18	Nurse	13
	Trucking	16	Police/Firefighter	12
	Architect	12		
	Engineer	11		

*number of different occupations listed as a measure of response diversity

**number of students who gave doctor or veternarian as a response. These numbers do not sum to 1004; the number of students responding. Only those "jobs" that were mentioned by ten or more of the students are displayed in this table.

TABLE 26. REASONS FOR OPINIONS ON "GOOD JOBS" (N=1004)

ITEM: "What makes it a good job?"

	Males		Females	
First Response Position	Reason	N	Reason	N
Migrants				
Most Frequent Response	Pays well	57	Helps people	55
2nd Most Frequent Response	Good working conditions	23	Pays well	44
3rd Most Frequent Response	Exciting job	22	Socialize with people	15
Non-Migrants				
Most Frequent Response	Pays well	92	Helps people	76
2nd Most Frequent Response	Helps people	39	Like job duties	33
3rd Most Frequent Response	Like job duties	38	Pays well	33
Second Response Position	Reason	N	Reason	N
Migrants				
Most Frequent Response	Pays well	13	Helps people	18
2nd Most Frequent Response	Helps people	12	Pays well	13
Non-Migrants				
Most Frequent Response	Pays well	32	Pays well	25
2nd Most Frequent Response	Helps people	15	Helps people	21

TABLE 27. STUDENTS' PERCEPTIONS OF JOBS RELATED TO MATHEMATICS ABILITY AND APTITUDE

ITEM: "If a kid like you likes math and is good at it, what kind of jobs might he or she be able to do best when he or she is grown up? Please list three."

	Migrants (N=219)		Non-Migrants (N=296)	
1st Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		30		34
Most Frequent Response	Teacher	52	Teacher	81
2nd Most Frequent Response	Store Sales Worker	30	Store Sales Worker	32
3rd Most Frequent Response	Bank Worker	18	Cashier & Bank Worker	23 each
Don't Know/No Answer		14		41
2nd Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		41		44
Most Frequent Response	Teacher	26	Teacher	42
2nd Most Frequent Response	Bank Worker	20	Store Sales Worker	27
3rd Most Frequent Response	Store Sales Worker & Cashier	15 each	Store Sales Worker & Cashier	18
Don't Know/No Answer		45		46
3rd Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		40		52
Most Frequent Response	Teacher	32	Teacher	34
2nd Most Frequent Response	Store Sales Worker	15	Bank Worker	17
Don't Know/No Answer		83		89

	Migrants (N=227)		Non-Migrants (N=262)	
1st Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		24		32
Most Frequent Response	Teacher	80	Teacher	84
2nd Most Frequent Response	Store Worker	42	Store Sales	36
3rd Most Frequent Response	Cashier	20	Cashier	27
Don't Know/No Answer		12		5
2nd Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		28		33
Most Frequent Response	Teacher	41	Teacher	38
2nd Most Frequent Response	Store Sales & Cashier	28 each	Store Sales	33
3rd Most Frequent Response	Bank Worker	19	Bank Worker	32
Don't Know/No Answer		37		27
3rd Response Position	**Jobs**	**n**	**Jobs**	**n**
Total Number of Different Jobs Reported		36		47
Most Frequent Response	Teacher	28	Teacher	47
2nd Most Frequent Response	Bank Worker	15	Bank Worker	21
Don't Know/No Answer		78		58

BEST COPY

TABLE 28. PERCEPTIONS OF STUDENTS OF JOBS RELATED TO INTEREST IN WORKING WITH ANIMALS

ITEM: "If a kid like you wants to work with animals, what kinds of jobs might he or she do best when he or she is grown up? Please list three.

All Males

	Migrants (N=219)		Non-Migrants (N=296)	
1st Response Position	Jobs	n	Jobs	n
Total Number of Different Jobs Reported		19		22
Most Frequent Respone	Veterinarian/Animal Doctor	49	Zoo Worker - No Skill	77
2nd Most Frequent Response	Zoo Worker - No Skill	74	Veterinarian/Animal Doctor	50
3rd Most Frequent Response	Zoo Director	11	Zoo Keeper	27
Don't Know/No Answer		17		6
2nd Response Position	Jobs	n	Jobs	n
Total Number of Different Jobs Reported		27		26
Most Frequent Response	Veterinarian/Animal Doctor	36	Veterinarian/Animal Doctor	40
2nd Most Frequent Response	Zoo Worker - No Skill	16	Pet Shop-No Skill & Zoo Worker-No Skill	18 each
3rd Most Frequent Response	Pet Shop - No Skill	15	Zoo Keeper	16
Don't Know/No Answer		39		40
3rd Response Position	Jobs	n	Jobs	
Total Number of Different Jobs Reported		26		25
Most Frequent Response	Veterinarian/Animal Doctor	21	Veterinarian/Animal Doctor	18
2nd Most Frequent Response	Animal Trainer	9	Pet Shop - No Skill	17
Don't Know		92		80

All Females

	Migrants (N=227)		Non-Migrants (N=262)	
1st Response Position	Jobs	n	Jobs	n
Total Number of Different Jobs Reported		22		21
Most Frequent Response	Zoo Worker	77	Veterinarian/Animal Doctor	98
2nd Most Frequent Response	Veterinarian/Animal Doctor	50	Zoo Worker - No Skill	66
3rd Most Frequent Response	Zoo Keeper	27	Zoo Keeper	34
Don't Know/No Answer		6		2
2nd Response Position	Jobs	n	Jobs	n
Total Number of Different Jobs Reported		26		25
Most Frequent Response	Veterinarian/Animal Doctor	40	Veterinarian/Animal Doctor	43
2nd Most Frequent Response	Pet Shop-No Skill & Zoo Worker-No Skill	18 each	Zoo Keeper	36
3rd Most Frequent Response	Zoo Keeper	16	Pet Shop - No Skill	33
Don't Know/No Answer		40		25
3rd Response Position	Jobs	n	Jobs	n
Total Number of Different Jobs Reported		25		28
Most Frequent Response	Veterinarian/Animal Doctor	19	Veterinarian/Animal Doctor	26
2nd Most Frequent Response	Animal Trainer	18	Pet Shop - No Skill	25
Don't Know/No Answer		80		74

BEST COPY AVAILABLE

TABLE 29. FREQUENCIES OF RESPONSES TO "BEST JOB" BY STATUS OF JOB REPORTED BY MIGRANTS AND NON-MIGRANTS (N=1004)

	Migrant Students		Non-Migrant Students	
	N	%	N	%
Professional	186	41.7	305	54.7
Entertainer/Athlete	24	5.4	35	6.3
Low-Level Professional	34	7.6	33	5.9
Low-Level White Collar	51	11.4	30	7.0
Skilled Craftsman	79	17.7	84	15.1
Semiskilled Operative	43	9.6	39	7.0
Farm/Unskilled Labor	3	0.7	3	0.5
Housewife	1	0.2	0	0
Unclassifiable/Missing	25	5.6	20	3.6
TOTAL	446	100.0	558	100.0

identified professional positions, some migrants may have had fewer opportunities to view individuals or explore jobs in the upper-level professional occupations than their peers who do not migrate, and therefore, do not as frequently identify the best jobs as upper-level professional. Migrants also viewed "Skilled Craftsmen" jobs as "Best Job" slightly more frequently than non-migrants. Perhaps, in their travels, migrants frequently have opportunities to see skilled craftsmen and lower-level professionals at work and fewer opportunities to become acquainted with upper-level professionals.

All of the above analyses were developed in an effect to determine the strength of hypothesized relationships prior to specification of the two-stage causal model outlined earlier in this report. In addition, the zero-order intercorrelation matrix displaying all of the interactions among the key variables is displayed in Table 30. Examination of these intercorrelations reveals weak support for the major hypothesized relationships between the demographic variables and attitudinal variables, and between both demographic and attitudinal variables and student achievement. In terms of achievement, the subscores are intercorrelated at $p<.0001$. Achievement, in terms of all subscores, is correlated with demographic variables in a manner consistent with the theoretical model. Migrancy was correlated with lower achievement scores. SES was also significantly correlated with achievement, since lower SES students were more likely to have lower achievement socres and, conversely, higher SES students were more likely to have higher achievement scores. Age was also significantly associated with achievement. Older students were

TABLE 30. INTERCORRELATION MATRIX OF DEMOGRAPHIC, ATTITUDINAL AND ACHIEVEMENT VARIABLES

	MIG	SOC SCI	SCI	ENG	MATH	RSE	IE	DAS	SSI	SES	AGE	RBEST	SEX
Migrant	1.000 p=.000												
Social Science	.1273 p=.000	1.000 p=.000											
Science	.1191 p=.000	.6877 p=.000	1.000 p=.000										
English	.1741 p=.000	.7454 p=.000	.6792 p=.000	1.000 p=.000									
Math	.1398 p=.000	.6405 p=.000	.6427 p=.000	.6984 p=.000	1.000 p=.000								
RSE	-.1015 p=.001	-.2613 p=.000	-.2724 p=.000	-.3129 p=.000	-.2927 p=.000	1.000 p=.000							
IE	-.1012 p=.001	-.2620 p=.000	-.2312 p=.000	-.3021 p=.000	-.3377 p=.000	.4856 p=.000	1.000 p=.000						
DAS	.0287 p=.183	.0604 p=.037	.0441 p=.096	.0547 p=.048	.0126 p=.351	.2110 p=.000	.1398 p=.000	1.000 p=.000					
SSI	.0632 p=.024	.1845 p=.000	.2001 p=.000	.2413 p=.000	.2138 p=.000	-.2784 p=.000	-.2883 p=.000	-.1568 p=.000	1.000 p=.000				
SES	-.3496 p=.000	-.2372 p=.000	-.2145 p=.000	-.2442 p=.000	-.2093 p=.000	.1781 p=.000	.1311 p=.000	-.0846 p=.000	-.1688 p=.000	1.000 p=.000			
AGE	-.0774 p=.021	-.1494 p=.000	-.1084 p=.003	-.1483 p=.000	-.1707 p=.000	.1166 p=.001	.1020 p=.005	.0343 p=.185	-.0388 p=.161	.1207 p=.008	1.000 p=.000		
RBEST	-.1269 p=.000	-.2639 p=.000	-.2395 p=.000	-.3085 p=.000	-.2970 p=.000	-.1621 p=.000	.1995 p=.000	.0120 p=.353	-.1754 p=.000	.1671 p=.000	.1290 p=.000	1.000 p=.000	
SEX	-.0392 p=.107	-.0427 p=.102	-.0255 p=.224	-.0182 p=.289	-.0368 p=.131	.0510 p=.053	.0882 p=.004	.0127 p=.345	.0787 p=.007	.0490 p=.082	-.0686 p=.036	-.0934 p=.002	1.000 p=.000

more likely to have lower achievement scores than were the younger students. Migrant students were also more likely to be older than non-migrant students and to be lower in SES.

The hypothesized intervening variables (RSE, I-E, DAS, SSI, Jobs) chosen for this study were generally found to be significantly related both to migrant status and to achievement. There was a weak association between self-esteem and migrancy, between internal-external control orientation and migrancy, and between greater isolation in school and migrancy. Migrancy was associated with lower self-esteem, greater external control orientation, and greater social isolation in the school environment. High self-esteem was associated with high achievement, and low self-esteem was associated with low achievement. Internal control orientation was positively correlated with both higher self-esteem and higher academic achievement.

Since both migrancy and SES appear to be explaining small amounts of variance and also appear to be interrelated, closer examination of the data was indicated. A more selective analysis was developed in order to partial out the specific effects of migrancy, SES, and sex upon the hypothesized intervening variables (in terms of the model discussed above). All individual items within the scales which appeared to discriminate between migrants and non-migrants, or between males and females, were analyzed. These partial correlations are presented in Tables 31 through 33.

Table 31 displays three items from the ten-item RSE scale which were analyzed. Two of these items weakly correlated with migrancy (Questions

TABLE 31. PARTIAL INTERCORRELATION MATRIX FOR SELECTED ITEMS FROM THE RSE

FACTOR	RSE SCALE ITEM	CONTROLLING FOR:					
	Zero Order	Sex	Migrancy	SES	Sex and Migrancy	Migrancy and SES	Sex and SES
	Question #3						
MIGRANCY	.0900 p=.002	.0892 p=.002	*	.0380 p=.140	*	*	.0377 p=.143
SES	-.1568 p=.000	-.1559 p=.000	-.1343 p=.000	*	-.1337 p=.000	*	*
SEX	-.0220 p=.244	*	.0185 p=.279	.0145 p=.341	*	-.0136 p=.350	*
	Question #6						
MIGRANCY	-0625 p=.024	-.0607 p=.028	*	-.0466 p=0908	*	*	-.0456 p=098
SES	.0540 p=.063	.0517 p=.071	.0344 p=.164	*	.0327 p=.178	*	*
SEX	.0488 p=.062	*	.0464 p=.071	.0462 p=.095	*	.0452 p=.100	*
	Question #8						
MIGRANCY	.0969 p=.001	.0963 p=.001	*	.0610 p=.042	*	*	.0608 p=.042
SES	-.1146 p=.001	-.1141 p=.001	-.086 p=.007	*	-.086 p=.007	*	*
SEX	-.0152 p=.316	*	-.0115 p=.359	-.0018 p=.479	*	-.0082 .482	*

3 and 6).* On the third item (Question 8),† migrancy did appear to continue to account for some unique component of the explained variance, while SES also accounts for a portion of the explained variance.

Five items from the I-E scale were also further analyzed in the manner outlined above. These results are presented in Table 32. In general, SES appeared to have an effect upon the relationship between migrancy and item response, but migrancy did continue to account for significant, although small, amounts of the explained variance. Lower-SES students and migrant students were more likely to affirm four of these items.** On the fifth item (Question 13), †† sex and SES appeared to account for explained variance while migrancy did not. Lower-SES students and female students were more likely to respond positively to this item than were higher-SES and male students, respectively.

---

*Question 3: "Most of the time, I feel that I do things wrong."

Question 6: "I like myself."

†Question 8: "I wish I could have more respect for myself."

**Question 11: "I think that most problems will take care of themselves if I just don't fool with them."

Question 20: "Most of the time, I feel that I can change what might happen tomorrow by what I do today."

Question 23: "Most of the time, I feel that there's not much use trying in school because most other students are just plain smarter than I am."

Question 24: "I believe that planning ahead makes things turn out better later."

††Question 13: "Most of the time, it doesn't matter if I try hard because things never turn out right anyway."

TABLE 32. PARTIAL INTERCORRELATION MATRIX FOR SELECTED ITEMS FOR I-E SCALE

FACTOR	I-E SCALE ITEM	CONTROLLING FOR:					
	Zero Order	Sex	Migrancy	SES	Sex and Migrancy	Migrancy and SES	Sex and SES
	Question #11						
MIGRANCY	.0969 p=.001	.0963 p=.001	*	.0610 p=.042	*	*	.0608 p=.042
SES	-.1146 p=.001	-.1141 p=.001	-.086 p=.007	*	-.086 p=.007	*	*
SEX	-.0152 p=.316	*	-.0115 p=.359	-.0096 p=.392	*	-.0082 p=.452	*
	Question #13						
MIGRANCY	.0726 p=.011	.0690 p=.015	*	.0193 p=.293	*	*	.0171 p=.315
SES	-.1567 p=.000	-.1526 p=.001	-.1405 p=.000	*	.0958 p=.003	*	*
SEX	-.1026 p=.001	*	-.1001 p=.001	-.0962 p=.003	*	-.0958 p=.003	*
	Question #20						
MIGRANCY	-.0754 p=.008	-.0750 p=.009	*	-.0752 p=.016	*	*	-.0750 p=.017
SES	.0141 p=.345	=.0135 p=.351	-.0132 p=.354	*	-.0135 p=.351	*	*
SEX	.0112 p=.362	*	.0082 p=.397	.0105 p=.383	*	.0087 p=.402	*
	Question #23						
MIGRANCY	.0972 p=.001	.0964 p=.001	*	.0534 p=.065	*	*	.0530 p=.066
SES	-.1363 p=.000	=.1354 p=.001	-.1097 p=.001	*	-.1091 p=.001	*	*
SEX	-.0221 p=.242	*	-.0184 p=.281	.0156 p=.329	*	-.0144 p=.342	*
	Question #24						
MIGRANCY	-.0880 p=.003	-.0849 p=.004	*	-.0791 p=.012	*	*	-.0773 p=.014
SES	.0401 p=.127	.0358 p=.155	.0100 p=.388	*	.0067 p=.425	*	*
SEX	.0915 p=.002	*	.0884 p=.003	.0897 p=.005	*	.0881 p=.006	*

Only one item from the DAS appeared to discriminate between migrancy and sex groups; this was Question 29.* Although on this item migrancy initially appeared to have some effect in the one-way analysis of variance, sex produced the greatest effect. The partial correlation analysis in Table 33 substantiates the sex effect, and this effect resulted from patterns in the data where males were more likely to agree with this statement than were females. Table 33 also presents another measure of social isolation, the SSI. Although, overall, there were differences on scale responses, Question 37† appeared to discriminate most among the migrants and non-migrants. Upon closer examination (Table 33), SES appeared to account for most of the explained variance. The distribution of responses to this item was significantly different for migrant and non-migrant students and is displayed in Table 34 ($\chi^2 = 7.25$, df=2, $p < .0266$). Lower-SES students are not as likely as higher-SES students to "attend a lot."

In order to access educational aspirations, students were asked, "How important do you think it is for you to graduate from high school?" As illustrated in Table 35, most migrant students of both sexes respond, "It's very important." The distributions of their responses are similar to their non-migrant peers. Only a small percentage of either group believes that it's "not very important at all."

---

*Question 29: "Real friends are as easy to find as ever."

†Question 37: "How often do you attend school activities, such as football games, pep rallies, club meetings, and so forth?"

TABLE 33. PARTIAL INTERCORRELATION MATRIX FOR SELECTED ITEMS FROM THE DAS AND SSI SCALES

FACTOR	DAS & SSI SCALES ITEM	CONTROLLING FOR:					
	Zero Order	Sex	Migrancy	SES	Sex and Migrancy	Migrancy and SES	Sex and SES
	Question #29						
MIGRANCY	.0197 p=.266	.0233 p=.231	*	.0031 p=.465	*	*	.0053 p=.441
SES	-.0481 p=.258	-.0527 p=.067	.0440 p=.106	*	-.0475 p=.089	*	*
SEX	.0878 p=.003	*	.0886 p=.002	.0904 p=.005	*	.0905 p=.005	*
	Question #37						
MIGRANCY	-.0807 p=.005	-.0798 p=.006	*	.0104 p=.385	*	*	.0107 p=.381
SES	.2578 p=.000	.2567 p=.000	.2458 p=.000	*	.2452 p=.000	*	*
SEX	.0258 p=.208	*	.0227 p=.231	.0136 p=.350	*	.0138 p=.348	*

TABLE 34. PARTICIPATION IN SCHOOL ACTIVITIES FOR MIGRANT AND NON-MIGRANT STUDENTS

ITEM: "How often do you attend school activities such as football games, pep rallies, club meetings, and so forth?"

	Migrants		Non-Migrants	
	N	%	N	%
I attend a lot.	98	22.1	147	26.4
I attend sometimes.	218	49.2	289	52.0
I almost never attend.	127	28.7	120	21.6
TOTAL	443	100.0	556	100.0

χ^2=7.25, df=2, p<.0266

TABLE 35. ATTITUDES TOWARD HIGH SCHOOL GRADUATION

ITEM: "How important is it to you to graduate from high school?"

	Migrants				Non-Migrants			
	Males		Females		Males		Females	
	N	%	N	%	N	%	N	%
Very Important	187	86.2	205	90.3	265	89.8	241	92.0
Perhaps Important	26	12.0	19	8.4	24	8.1	18	6.9
Not Important	4	1.8	3	1.3	6	2.1	3	1.1
TOTAL	217	100%	227	100%	295	100%	262	100%

χ^2=2.10, df=2, p<.3506

CONCLUSIONS AND RECOMMENDATIONS

The data provide weak support for the major hypothesized relationships postulated by the causal model. The data indicate that (in the migrant students' home base school) migrant students differed from non-migrant students in some areas and were very similar in others. The migrants were similar to non-migrants on self-esteem, locus of control, and social isolation. In the school setting, both groups had positive self-esteem, an internal locus of control, and neither group indicated social isolation. Both groups placed a high value on high school graduation, most identified professional-level jobs as highly desirable jobs, and both groups of students often expressed a desire to attain these jobs.

However, upon closer examination of the data, migrant students appeared to differ on each of these measures. Concerning self-esteem, it was a difference in degree of positive self-esteem. Non-migrants, as a group, were in the "high" self-esteem category while migrants were in the "medium" category. Ziller (1969) defined self-esteem as self-evaluation which evolves within a social frame of reference. Such a view is similar to Festinger's (1954) theory of social comparison processes. In order to measure the relevance of certain factors, such as social class or migrancy, upon self-esteem, we must know with whom an individual compares his social status (Rosenberg & Pearlin, 1978). It could be argued that movement in and out of other areas of the country has served to provide migrants with greater opportunities to compare their own social status with others outside the Lower Rio Grande Valley

of Texas, and that these comparisons have served to depress the self-esteem level of migrant youth. This argument is similar to that advanced by Gecas (1973) regarding the less positive self-concepts of settled-out migrants in Washington State, when they were compared to those of migrants currently in the stream.

Much like the pattern found for self-esteem, migrant students differed only from non-migrant students on locus of control in terms of the degree of internality. Although migrant students had an internal orientation, migrancy (separate from SES) did appear to effect a more external orientation on certain items of the scale. Two of these I-E items appeared to be related to a general external orientation (Questions 11 and 20), while others (Questions 23 and 24) are more related to school activities. The responses to these items should be examined by educators, since they are likely to affect students' orientation, planning, studying, and development of skills, all factors which are related to planning for future career development.

On these items, the data suggest that migrants have a more external orientation than non-migrants; this may result from a "present time" orientation found among those with a migrant lifestyle. Further, since migrant students have positive self-esteem, the above items indicate that migrants externalized failure in school by believing that such failure is because "other kids are just plain smarter than me" (Question 23). The data also suggest that females are more externally oriented than males. This was most apparent on one item. As a group, females were most likely to believe that "it doesn't matter if I try hard

because things never turn out right anyway." SES had an effect similar to that of sex, in that lower-SES subjects were also likely to endorse this statement.

On the social isolation measures, the migrant group appeared similar to their non-migrant peers. In general, neither group indicated social isolation. However, migrant students' mean scores on the SSI indicated significantly more isolation than their non-migrant peers, and males were more isolated than females. It should be noted that, consistent with the limited previous research on migrants, the attitudes of migrant youth were just as positive toward school as others in their seventh grade class. On the cocurricular involvement item (Question 37), SES appeared to be the important factor. Lower-income students were less likely to be involved in cocurricular activities than higher SES students. The distributions of migrants' and non-migrants' responses indicate that migrants are less likely than non-migrants' to be "actively involved" and more likely than non-migrants "never" to be involved.

The analyses of students' perceptions of jobs and related aptitudes and interests indicate that all students in this seventh grade cohort have a constricted view of the occupational structure and perceive "good jobs" in sex-stereotyped ways. The data further suggest that migrants have an even narrower view of the occupational structure. Migrant females are particularly "at risk," in terms of occupational aspirations, since they combine this narrow view with sex-typed expectations as to what jobs are appropriate for females. Since the school district in which these youth were enrolled does not have an elementary or junior

high school career development program, the data suggest that programs at these levels could serve all students, and especially migrants. Such programs are also suggested for districts receiving transitory migrant students. These programs would not address the entire problem of migrant school failure, but they could offer a limited response to the apparent lack of professional role models in the students' environment.

As discussed in the analysis section above, SES appeared to confound the effects of migrancy. Since migrancy and lower SES are obviously interrelated, the current data prevented attempts to sort out the unique effects of migrancy. Further, since the possible causal relationship of migrancy and SES cannot be demonstrated from the current data, explanation of their effects upon achievement is limited.

Although the migrant students are performing closer to their peers in achievement than would have been predicted, the data clearly demonstrate that migrant students are performing significantly below other seventh graders in the migrants' home base school district. Achievement and the age of the student were positively correlated in that older students were less likely to have high achievement scores. Migrant students are likely to be "retentions." However, a recent review of research in retention found no evidence that ". . .retention is more beneficial than grade promotion for students with serious academic and adjustment difficulties" (Jackson, 1975, p.627).

The extent to which specialized and supplemental educational support services provided to migrants (i.e., Migrant Education) has

influenced achievement of migrant students cannot be determined from present data. However, one explanation for the apparent "closeness" of the gap in achievement between migrants and non-migrants is that special educational services to migrants have directly contributed to achievement or to attitudes correlated with achievement. It could be argued that the general similarities noted between these two groups has been influenced by the specialized and supplemental services provided to migrants by the home base school district, receiver school districts, other agencies, and cooperating efforts among agencies. The cumulative effect of these educational services may have reduced the possible disjuncture between the school and the student which results from the migrant student's mobility. This reduction in disjuncture may have fostered attitudes among migrants which are closer to those of non-migrants. Future research should examine these issues in detail.

Although the current research attempted to address the central question of why migrants fail, the results have raised more questions than they have provided answers. Only limited explanation can be provided by the causal model initially proposed. It should be concluded that either the causal model did not investigate the right variables, did not adequately investigate the right variables, or did not include all the relevant variables.

In the process of conducting this small-scale, unfunded research, much has been discovered inadvertently about the nature of schools and their possible effects upon migrant achievement. Some of these secondary findings suggest that research concentrating upon the student may have

failed to include critical structural data about schools. These structural factors may include a school system's withdrawal and late-enrollment policies and the attitudes and practices of teachers, administrators and counselors toward migrant students. Inclusion of such structural data may allow the causal model to explain more variance in student behavior.

In order to develop a more conclusive picture of migrant students, future research should examine attitudes of students not only in home base systems, but also in receiver systems, and researchers should collect structural data on teacher behavior and practices, such as those already demonstrated to be related to Mexican American student achievement in the Southwest (U.S. Commission on Civil Rights, 1973). Such data might be useful in determining causal relationships among school variables, student variables, migrancy, and achievement. Future research should also operationalize the term migrant more carefully to account for the types of migrants ("active" or "settled-out") and for the length of time a child has traveled in the stream.

REFERENCES

America's Nomads: the children who follow the stream. P.T.A. Today, May, 1979, 1-4.

Anderson, J.G. and Johnson, W.H. Stability and change among three generations of Mexican-Americans: Factors affecting achievement. American Educational Research Journal, 1971, 8, 285-309.

Ausubel, D.F. and Ausubel, D. Ego development among segregated children. In A.H. Passon (Ed.), Education in depressed areas. New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Baker, R.C., Roll, S., and Melgoza, B. Anglo-Chicano and male-female differences in disclaimed activity. Journal of Cross-Cultural Psychology, 1979, 10, 191-202.

Bandura, A. Influence of models' reinforcement contingencies on the acquisition of imitative responses. Journal of Personality and Social Psychology, 1965, 1, 589-595.

Battle, E.S. and Rotter, J.B. Children's feelings of personal control related to social class and ethnic group. Journal of Personality, 1963, 482-490.

Berger, C.R. Sex differences related to self-esteem factor structure. Journal of Consulting and Clinical Psychology, 1968, 32, 442=446.

Bowles, S. and Gintis, H. Schooling in capitalist America. N.Y.: Basic Books, 1976.

Caliver, A. Interrelations among various background factors. A personal study of Negro college students. Westpoint, Connecticut: Negro University Press, 1970.

Cardenas, J.A. and Cardenas, B. The theory of incompatibilities. San Antonio, Texas: Intercultural Development Research Association, 1977.

Carrillo-Beron, C. Traditional family ideology in relation to locus of control: A comparison of Chicano and Anglo women. San Francisco: R & E Research Associates, 1974.

Crandal, V.J., Katkovsky, W., and Preston, A. Motivational and ability determinants of young children's intellectual academic achievement situations. Child Development, 1963, 33, 643-661.

Carter, T.P. Negative self-concepts of Mexican-American students. School and Society, 1968, 96, 217-219.

Cervantes, R.A. and Bernal, H.H. Psychological growth and academic achievements in Mexican-American students. San Antonio, Texas: Development Associates, 1976.

Coles, R. Uprooted children. New York: Harper & Row, 1970.

Dean, D. Alienation: its meaning and measurement. American Sociological Review, 1961, 26 (5), 753-758.

Dworkin, A.G. Stereotypes and self-images held by native-born and foreign-born Mexican-Americans. Sociology and Social Research, 1965, 49, 214-224.

Epstein, R. and Komorita, S.S. Self-esteem, success-failure, and locus of control in Negro children. Developmental Psychology, 1971, 4 (1), 2-8.

Erikson, E.H. The problem of ego identity. In U.R. Stein, A.J. Vidich, and D. Manning (Eds.), Identity and anxiety: Survival of the person in mass society. N.Y.: The Free Press of Glencoe, 1960.

Evans, F.B. A study of sociocultural characteristics of Mexican-American and Anglo junior high school students and the relation of these characteristics to achievement. Dissertation Abstracts International, 1970, 30, 1826A.

Evans, F.B. and Anderson, J.G. The psychocultural origins of achievement and achievement motivation: the Mexican-American family. Sociology of Education, 1973, 46, 396-416.

Farris, B. and Brymer, R.A. Differential socialization of Latin and Anglo-American youth: An exploratory study of the self-concept. In J.H. Burma (Ed.), Mexican-Americans in the United States. New York: Harper & Row, 1970.

Gaa, J.P. and Shores, J.H. Domain specific locus of control among Black, Anglo and Chicano undergraduates. The Journal of Social Psychology, 1979, 107, 3-8.

Gaddy, M.E. and Ockerman-Garza, J.D. Predicting academic success for high-risk students: Implications for improving the postsecondary response to youth employability. Under review.

Galarza, E. The Mexican-American migrant worker - culture and powerlessness. Integrated Education, 1971, 9, 17-21.

Garza, E.D. and Ockerman-Garza, J.D. Adolescent Mexican-American student attitudes of self-concept, locus of control and family ideology in the Lower Rio Grande Valley of Texas. Palo Alto, California: R & E Research Associates, 1979.

Garza, R.T. and Ames, R.E., Jr. A comparison of Anglo- and Mexican-American college students on locus of control. Journal of Consulting and Clinical Psychology, 1974, 42, 619.

Gecas, V. Self-conceptions of migrant and settled Mexican-Americans. Social Science Quarterly, 1973, 54, 579-595.

Gecas, V. Family and social structural influences on the career orientations of rural Mexican-American youth. Rural Sociology, 1980, 45, 272-289.

Gergen, K.J. The concept of self. New York: Holt, Rinehart, and Winston, Inc., 1971.

Harrison, F.I. Relationship between home background, school success, and adolescent attitudes. Merril-Palmer Quarterly of Behavior and Development, 1968, 14, 331-344.

Healey, G.W. Self-concept: a comparison of Negro, Anglo, and Spanish-American students across ethnic, sex, and socioeconomic variables. San Francisco: R & E Research Associates, 1974.

Henggeler, S.W. and Tavormina, J.B. The children of Mexican-American migrant workers: A population at risk? Journal of Abnormal Child Psychology, 1978, 6, 97-106.

Hinkle, G.E., Tipton, R.L. and Tutchings, T.R. (Eds.). Who cares? Who counts? Austin, Texas: Teacher Corps Project, 1979.

Hishiki, P.C. The self-concepts of sixth-grade girls of Mexican-American descent. California Journal of Educational Research, 1969, 20, 56-62.

Hoffman, C. Empowerment movements and mental health: Locus of control and commitment to the United Farm Workers. Journal of Community Psychology, 1978, 6, 216-221.

Hollander, J. Sex differences in sources of self-esteem. Journal of Consulting and Clinical Psychology, 1972, 38, 343-347.

Hollingshead, A.B. Two-factor index of social position. New Haven, Connecticut: Mimeographed, 1957.

Hunter, B. RTI study results and beyond, Denver: Education Commission of the States, unpublished memorandum, October 28, 1980.

Kagan, S. and Knight, G.P. Cooperation, competition and self-esteem. Journal of Cross-Cultural Psychology, 1979, 10, 457-467.

Knight, G.P., Kagan, S., Nelson, W. and Gumbiner, J., Acculturation of second- and third-generation Mexican-American children. Journal of Cross-Cultural Psychology, 1978, 9, 87-97.

Kuvlesky, W.P., Wright, D.E. and Juarez, R.Z. Status projections and ethnicity: A comparison of Mexican-American, Negro, and Anglo youth. Journal of Vocational Behavior, 1971, 1, 131-151.

Kuvlesky, W.P. and Juarez, R.Z. Mexican-American youth and the American dream. In J.S. Picou and R.E. Campbell (Eds.), Career Behavior of special groups. Columbus, Ohio: Charles E. Merrill Publishing Company, 1975.

Larned, D.T. and Muller, D. Development of self-concept in Mexican-American and Anglo students. Hispanic Journal of Behavioral Sciences, 1979, 1, 179-185.

Lefcourt, H.M. and Ludwig, G.W. The American Negro: a problem in expectancies. Journal of Personality and Social Psychology, 1965, 377-380.

Lefcourt, H.M. Locus of Control. Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc., 1976.

Lessing, E.E. Racial differences in indices of ego functioning relevant to academic achievement. Journal of Genetic Psychology, 1969, 1, 167-181.

Long, B.H., Henderson, E.G., and Ziller, R.C. Manual for the self social constructs test. Baltimore, Maryland: Goucher College, 1970.

Malry, L. The educational and occupational aspirations of Anglo, Spanish, and Negro high school students (Doctoral dissertation, University of New Mexico, 1968). (University Microfilms Order No. 69-8284).

McGhee, P. and Crandall, V.C. Beliefs in internal-external control of reinforcement and academic performance. Child Development, 1968, 39, 91-102.

Mead, G.H. Mind, self and society. Chicago: University of Chicago Press, 1974.

Messer, S.B. The relation of internal-external control to academic performance. Child Development, 1972, 43, 1456-1462.

Muller, D. and Leonetti, R. Self-concepts of primary level Chicano and Anglo students. California Journal of Educational Research, 1974, 25, 57-60.

Nowicki, S., Jr., and Strickland, B.R. A locus of control scale for children. Journal of Consulting and Clinical Psychology, 1973, 40, 148-154.

Ockerman-Garza, J.D. Self-esteem and social anchorage of adolescent White, Black and Mexican-American students. Palo Alto, California: R & E Research Associates, 1979.

Ogbu, J.U. Minority education and caste. New York: Harcourt Brace Jovanovitch, Publishers, 1978.

Parsons, T.W., Jr. Ethnic cleavage in a California school (Doctoral dissertation, Stanford University, 1965). (University Microfilm No. 66-2602).

Piers, E.V. Children's self-esteem, level of certainty, and responsibility for success and failure. The Journal of Genetic Psychology, 1977, 130, 295-304.

Prawat, R.S., Grissom, S. and Parish, T. Affective development in children, grades 3 through 12. The Journal of Genetic Psychology, 1979, 135, 37-49.

Purkey, W.W. Self-concept and school achievement. New Jersey: Princeton University Press, 1965.

Robey, B. The top 50 income markets. American Demographics, 1981, 3, 40-41.

Robinson, J.P. and Shaver, P.R. Measures of social psychological attitudes. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1973.

Rosenberg, M. Society and adolescent self-image. Princeton, New Jersey: Princeton University Press, 1965.

Rosenberg, M. and Simmons, R.G. Black and White self-esteem: The urban school child. A.M. and C. Rose Monograph Series, American Sociological Association, Washington, D.C., 1971.

Rosenberg, M. and Pearlin, L.I. Social class and self-esteem among children and adults. American Journal of Sociology, 1978, 84, 53-77.

Rosenkrantz, P., Bee, H., Vogel, S., Boverman, I., and Boverman, D. Sex-role stereotypes and self-concepts in college students. Journal of Consulting and Clinical Psychology, 1968, 32, 287-295.

Rotter, J.B. Social learning and clinical psychology. New York: Prentic -Hall, 1954.

Rotter, J.B., Chance, J. and Phares, E.J. (Eds.) Applications of a social learning theory of personality. New York: Holt, Rinehart, and Winston, 1972.

Safilios-Rothschild, C. Sex-role socialization and sex discrimination: A synthesis and critique of the literature. Washington, D.C.: National Institute of Education, 1979.

Samuels, D.D. and Griffore, R.J., Ethnic and sex differences in self-esteem of preschool children. The Journal of Genetic Psychology, 1979, 135, 33-36.

Schulman, S., Williams, J.E. and Guena, R.S. Mexican-American youth and vocational education in Texas: summary and recommendations. (Contracts numbers 29148 and 38064, Division of Occupational Research and Development of the Texas Education Agency), Houston, Texas: University of Texas, Center for Human Resources, 1973.

Scott, J.D. and Phelan, J.G. Expectancies of unemployable males regarding source of control of reinforcement. Psychological Reports, 1969, 25, 911-913.

Shannon, L.W. The changing world view of minority migrants in an urban setting. Human Organization, 1979, 38, 52-62.

Soares, A.T. and Soares, L.M. Self-perception of culturally disadvantaged children. American Educational Research Journal, 1969, 6, 31-44.

Stephens, M.W. and Delys, P. External control expectancies among disadvantaged children at preschool age. Child Development, 1973, 9, 55-65.

St. John, N.G. The elementary classroom as a frog pond: self-concept, sense of control, and social context. Social Forces, 1971, 49, 581-595.

Taylor, R.B. Sweatshops in the sun: Child labor on the farm. Boston: Beacon Press, 1973.

Texas Education Agency, Innovative project: migrant dropout study, 1979-1980. Corpus Christi, Texas: Region II, Education Service Center, 1980.

Townbridge, N. Self-concept and socioeconomic status in elementary school children. American Educational Research Journal, 1972, 9, 525-537.

U.S. Bureau of the Census. City and County Data Book, 1977. Washington, D.C.: U.S. Government Printing Office, 1978.

U.S. Commission on Civil Rights, Report V: Mexican-American education differences in teacher interaction with Mexican-American and Anglo students. Washington, D.C.: U.S. Government Printing Office, 1973.

Wylie, R.C. The self-concept. Lincoln, Nebraska: University of Nebraska Press, 1974.

Wolfgang, A. and Potvin, R. Internality as a determinant of classroom participation and academic performance among elementary students. Paper presented at the American Psychological Association Convention, 1973. (Lefcourt, H.M. Locus of control. Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc., 1976.)

Ziller, R.C., Hagey, J., Smith, M.D., and Long, B. Self-esteem: a self-social construct. Journal of Consulting and Clinical Psychology, 1969, 33, 84-95.

Zytkoskee, A., Strickland, B.R., and Watson, J. Delay of gratification and internal versus external control among adolescents of low socio-economic status. Developmental Psychology, 1971, 4, 93-98.

BLANK PAGE
DO NOT FILM